The Republic of South Sudan

Ministry of Information, Communication Technology and Postal Services (MICT&PS)

Eastern Africa Regional Digital Integration Project (P176181)

Environmental and Social Management Framework (ESMF)

(Final)

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ACRONYMS AND ABBREVIATIONS

BFR	Brominated flame retardants
CAPEX	Capital Expenditure
CRT	Cathode Ray Tubes
CERT	Computer Emergency Response Team
CEDAW	Convention on the Elimination of all forms of Discrimination against Women
C-ESMP	Constructor - ESMP
CERC	Contingency Emergency Response Component
CFCs	Chlorofluorocarbons
CNS	Central Nervous System
CEO	Chief Executive Officer
CoC	Code of Conduct
DRC	the Democratic Republic of the Congo
EAC	East African Community
EA-RDIP	Eastern Africa Regional Digital Integration Project
EEE	Electrical and Electronic Equipment
EHS	Environment Health and Safety
EHSG	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
ESCP	Environmental and Social Commitment Plan
ESSD	Environment and Sustainable Development Directorate
ESF	Environment and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
E&S	Environmental and Social
ESHS	Environmental, Social, Health and Safety
ESS	Environmental and Social Standards
EWMP	E-Waste Management Plan
FM	Financial Management
FPIC	Free Prior Informed Consent
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GHG	greenhouse gases
GIIP	Good International Industry Practice
GoSS	Government of the Republic of South Sudan
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GM	Grievance Mechanism
GNI	Gross National Income
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IARC	International Agency for Research on Cancer
IBA	Important Bird Areas
ICT	Information Communication Technology
IDA	International Development Association
IDP	Internally Displaced Persons
IGAD	Inter-Governmental Authority for Development
IFC	International Finance Corporation
ILO	International Labour Office
IMT	Inter-Ministry Team

IP	Implementing Partner
IUCN	International Union for Conservation of Nature
IXPs	Internet Exchange Points
LMP	Labor Management Procedures
LRP	Livelihood Restoration Plan
MGCSW	Ministry of Gender, Child and Social Welfare
NCA	National Communication Authority
NEA	Nationwide Enterprise Architecture
M&E	Monitoring and Evaluation
MDA	Ministries, Departments and Agencies
MGCSW	Ministry of Gender, Child, and Social Welfare
MICT&PS	Ministry of Information, Communications, Technology and Postal Services
MoEF	Ministry of Environment and Forestry
MoFP	Ministry of Finance and Planning
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NEMC	National Environment Managemen Council
OHS	Occupational Health and Safety
PBT	bio-accumulative toxins
PPA	Personal Protective Equipment
PBB	polybrominated biphenyls
PBDE	polybrominated diphenyl ethers
PCB	polychlorinated biphenyls
PCDD	polychlorinated dibenzo-p-dioxins
PCDF	polychlorinated dibenzofurans
PCT	Project Coordination Team
PIM	Project Implementation Manual
PIT	Project Implementation Team
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
PSC	Project Steering Committee
PTS	persistent toxic substances
PVC	Polyvinyl chloride
RAP	Resettlement Action Plan
REN	Research and education networks
RCCE	Risk Communication and Community Engagement
RPF	Resettlement Policy Framework
SDG	Sustainable Development Goal
SDM	Single Digital Market
SOP	Series of Project
SOP	Standard Operating Procedures
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SPU	Special Protection Unit
SRAMP	Security Risk Assessment and Management Plan
SSAHUTLC	Sub-Saharan African Historically Underserved Traditional Local Communities
SSBS	South Sudan Bureau of Standards
SSIGW	South Sudan International Gateway
SWP	safe working procedures
TA	Technical Assistance
TBBA	tetrabromo-bisphenol-A

TC	Technical Committee
TCDD	tetrachlorodibenzo-p-dioxin
ToR	Terms of Reference
TRA	task-specific risk assessment
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNSCR	United Nations Security Council Resolution
USAF	Universal Service Access Fund
VLD	Voluntary Land Donation
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization

EXECUTIVE SUMMARY

1. South Sudan remains one of the few African countries without an adequate national backbone fiber connection and lacks international redundancy, even though it is now more than a decade since independence. In the absence of an adequate national fiber backbone (the country only has 200 km of fiber optic cables), South Sudan is relying mainly on expensive satellite service. The mobile networks of Zain and MTN are mostly backhauled by microwave, which limits 4G rollout. Internet penetration is very low with a unique mobile broadband subscription rate estimated at 9%. Fixed line networks are almost non-existent as legacy fixed networks were destroyed during the civil war, and the former incumbent, Sudatel, withdrew from the market in 2012. Broadband is expensive with 1GB of data per month costing around 15% of Gross National Income (GNI) per capita.

2. Inadequate internet connectivity has been identified as a key hurdle hindering development of key digital economy pillars, among others. Lack of high-speed internet connectivity is cited as a major barrier across the board. Educational institutes struggle to provide training on digital skills due to lack of connectivity and ICT infrastructure, digital businesses and financial services are primarily limited to Juba on account of lack of connectivity in the states, and digital public platforms are unable to provide nationwide e-services or conduct internal business in an efficient and transparent fashion. Other challenges of lack of ICT, energy and transport infrastructure, security, access to inputs like capital or talent, or an enabling environment for private sector development also exist.

3. The Eastern Africa Regional Digital Integration Project (EA-RDIP) (2023-2028) addresses connectivity needs for countries in the Horn of Africa region. The project aims to advance the regional integration of digital markets in Eastern Africa through supporting cross-border connectivity, harmonization of data and e-commerce regulations and policies, and removal of trade barriers, with the vision of establishing a Single Digital Market (SDM). Regional efforts to move towards an SDM are envisioned to have economic and welfare gains to all participating economies and will be especially beneficial for smaller economies to tap larger regional markets for economic expansion. It is proposed for the project components to follow the SDM framework and for participating countries (Somalia, South Sudan in phase 1) to tailor each component for its investment and technical assistance needs.

4. The Series of Project (SOP) development objective is to promote the expansion of an integrated digital market across Eastern Africa y increasing cross-border broadband connectivity, data flows, and digital trade in the region. SOP Phase I development objective is to advance digital market integration in the Eastern Africa region by increasing affordable access to regional broadband connectivity and strengthening the enabling environment for cross-border digital services. Specifically in South Sudan, EA-RDIP ($87 million) will support the Government of the Republic of South Sudan (GoSS) to establish digital connectivity and integrate with the regional digital market. The project has four components: Component 1. Connectivity Market Development and Integration; Component 2. Data Market Development and Integration; Component 3. Online Market Development and Integration; and Component 4. Project Management.

5. To comply with the World Bank Environmental and Social Standard 1 (ESS1) and other ESSs, the borrower has prepared an Environmental and Social Management Framework (ESMF), an Environmental and Social Commitment Plan (ESCP), and a Stakeholder Engagement Plan (SEP). The ESMF sets forth the basic principles and prerogatives the project will be following during implementation once the physical footprints are known, including the preparation of site specific Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs). All environmental and social (E&S) instruments will be the subject of consultation

with beneficiaries and institutional stakeholders. All E&S instruments will be publicly disclosed both in-country and on the project website prior to the physical start of project or activity implementation.

6. This ESMF is prepared in compliance with the WB's ESF ESSs, as well as the South Sudanese environmental and social management regulations, which stipulate that funding of development projects and programs should be subject to prior assessment and the mitigation of potential environmental and social, including occupational health and safety (OHS), Gender-based violence/sexual exploitation and abuse/sexual harassment (GBV/SEA/SH) effects of subprojects.
7. Per the ESF classification, the project has been categorized as a **High Risk** project based on the expected potential environmental and social impacts and risks, including the weak E&S risk management capacity and the FCV contextual risks.
8. In terms of institutional arrangements, the Ministry of Information, Communication Technology and Postal Services (MoICT&PS) of the Government of the Repblic of South Sudan (GoSS) will be the main implementer of the project. It will establish a Project Implementation Unit (PIU) with qualified staff and resources to support management of Environmental, Social, Health and Safety risks and impacts of the Project, including one environmental and one social risk management expert. In addition, the experts will be supported by one Security Specialist, one Environmental and one Social risk management consultant and other thematic consultants as required (e.g. in regards to Occupational Health and Safety (OHS), GRM, Gender Based Violence (GBV) etc. The PIU will be responsible for monitoring the adherence to E&S instruments for the activities.

9. In view of the environment, South Sudan is drained by the Nile and its main tributary, the White Nile (Al Bahr al Abyad). The White Nile flows north from central Africa, draining Lake Victoria and the highland regions of Uganda, Rwanda, and Burundi. At Bor, the great swamp of the Nile, Sudd begins. The river has no well-defined channel here; the water flows slowly through a labyrinth of small spillways and lakes choked with papyrus and reeds. The White Nile has several substantial tributaries that drain southern Sudan.

10. Overall, South Sudan is covered in a rich diversity of ecosystems which are dynamic complexes of plant, animal and microorganism communities and their nonliving 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 savanna; Sudd swamps and other wetland, and Semi-arid region.

11. According to the disputed results of the 2007 Population and Housing Census of Sudan, South Sudan has a total population of 8, 260,490 with an average household size of 6.3. South Sudan has a slightly higher male population (about 52 %) versus females (about 48 %). In terms of ethnic composition, there are many ethnic groups in South Sudan of which the Dinka, Nuer, Murle, Mundari, Toposa in Kapoeta and Boya are the main agro-pastoralist groups.

12. GBV is a challenge in South Sudan because of the patriarchal nature of the society and the context of socio-political conflict and violence over a long period. GBV, including early marriage, together with conflict greatly affects women and girls' education. Secondary net enrolment rates are the lowest in the region at 6 percent for boys and 4 per cent for girls. Similarly, only 18 per cent of girls and 33 percent of boys complete primary education. Almost 31 percent of the schools have suffered attacks since 2013 and of all schools that were open since then, a quarter became non-functional by 2016 (World Bank, 2019).

13. The potential environmental risks identified mainly relate to planned activities under Components 1 and 2. The cross-border and backbone network connectivity will include linear digital infrastructure that may pass through critical habitats or biodiversity hotspots during construction periods and possibly during maintenance. The installation of fixed line components, including long distance fiber optic cables, and access roads to transmission towers and other fixed infrastructure, may require construction of corridors crossing aquatic habitats with the potential to disrupt watercourses, wetlands, and riparian vegetation. Additionally, construction and electronic wastes may be generated, as well as localized greenhouse gas emissions. The construction activities may also account for an increased demand for resources including water, energy and raw materials, and produce health and safety risks in the various sites including rise in communicable diseases such as HIV/AIDS and Covid-19.

14. Deployment of last-mile connectivity solutions, under Component 2: while the specific technology and approach of this component are yet to be defined, relevant connectivity technologies that will be used to connect hospitals, schools, and other government offices, etc., are likely to include a mix of technical solutions including mobile/wireless (3G, 4G, Point-to-Point WiMax) networks, fiber (either aerial or terrestrial cables), or aerial (balloons/drones) solutions. The connectivity technology selected will depend both on commercial and geographic feasibility, as well as consider potential site-specific E&S risks in weighing connectivity options.

15. Key social risks and impact relate to the potential need for acquisition of land and to physical resettlement and /or economic displacement. Project impacts on land tenure could affect vulnerable groups differently, notably traditional local communities (the presence of communities that meet the P/SSAHUTLCs still has to be verified), as well as women, people living with disabilities, and those with smaller land plots or with informal rights to the land they use. Furthermore, the expansion of digital infrastructure will require a construction workforce and may result in a moderate labor influx, which has the potential for impacts on community health and safety, including transmission of diseases, such as HIV/AIDS and Covid-19. In addition, there may be risks associated with the use of security personnel during construction. Potential labor risks also include the use of child and forced/trafficked labor, especially in relation to construction activities and the supply chain, as well as in relation to occupational health and safety, worker living conditions (it is expected that the labor influx will be housed in worker camps), hours of work, remuneration, and other terms and conditons of employment. Proposed TA may contain downstream environmental and social risks and impact. Establishing foundational ID systems, provision of public and private services online and data exchange all bring about risks associated with data security.

16. These risks and impacts will be managed through the mitigation hierarchy approaches (avoid, minimize, mitigate and compensate) included in this ESMF and subsequently in all sites-specific operational management plans, such as ESIAs, ESMPs and/or RAPs to be developed during the implementation stage once the detailed characteristics of subproject sites are confirmed.

17. Stakeholder consultations have been undertaken for the design of the Project, including with Government officials, private sector entities, women's groups and others. Subproject specific stakeholder consultations will be undertaken once the subproject sites are known. These will includes consultations on environmental and social risks and impacts as well as mitigation measures.

18. A grievances redress mechanism (GRM) has been develop to manage potential complaints from the beneficiaries and the affected communities. A set of specific procedures have been set up to handle workers grievances as part of the labor management procedures. A dedicated channel to

address GBV/SEA//SH cases has been set up as part of the GBV Action Plan. A stand-alone Stakeholder Engagement Plan (SEP) has been prepared to define information dissemination and the consultation of all stakeholders.

19. A comprehensive monitoring and evaluation system to monitor progress towards the project development objective and expected results has been developed. A capacity building and training program for both the beneficiaries and the E&S staff has been elaborated and will be implemented early on in the project.

20. The estimated costs for the E&S implementation are 1,720,000 USD.

Table 1Estimated budget for implementation of ESMF

	Required Resources	**USD**
	PIU – Monitoring of E&S	
1.	Human Resources:	
	Social Expert	Incl. in PMU staff costs
	Environmental Expert	Incl. in PMU staff costs
	GBV Specialist	Incl. in PMU staff costs
	Security Specialist	Incl. in PMU staff costs
	Other consultants	Incl. in PMU budget
3.	Logistics / Travel for monitoring and supervision	150,000
	Grievance Redress Mechanism	
4.	Hotline and other mechanisms	300,000
	Implementation of Risk Mitigation Measures	
1.	Implementing partner or contractor E&S staff	Incl. in IP or contractor budget
2.	Preparation of ESIA/ESMP (consultants) – PIU or IP	100,000
3.	Implementation of Risk Mitigation Measures	300,000 (contractor)
4.	SEP implementation	670,000 (PIU)
5.	Trainings and Capacity Building	50,000 (PIU)
6.	SEA/SH Prevention and Response Plan	200,000 (PIU)
	TOTAL	**1,720,000**

1. INTRODUCTION

Background

21. South Sudan remains one of the few African countries without an adequate national backbone fiber connection and lacks international redundancy, even though it is now more than a decade since independence. In the absence of an adequate national fiber backbone (the country only has 200 km of fiber optic cables), South Sudan is relying mainly on expensive satellite service. The mobile networks of Zain and MTN are mostly backhauled by microwave, which limits 4G rollout. Internet penetration is very low with a unique mobile broadband subscription rate estimated at 9%. Fixed line networks are almost non-existent as legacy fixed networks were destroyed during the civil war, and the former incumbent, Sudatel, withdrew from the market in 2012. Broadband is expensive with 1GB of data per month costing around 15% of Gross National Income (GNI) per capita.

22. Inadequate internet connectivity has been identified as a key hurdle hindering development of key digital economy pillars, among others. Lack of high-speed internet connectivity is cited as a major barrier across the board. Educational institutes struggle to provide training on digital skills due to lack of connectivity and ICT infrastructure, digital businesses and financial services are primarily limited to Juba on account of lack of connectivity in the states. Digital public platforms are unable to provide nationwide e-services or conduct internal business in an efficient and transparent fashion. Other challenges of lack of ICT, energy and transport infrastructure, security, access to inputs like capital or talent, or an enabling environment for private sector development also exist.

23. The Eastern Africa Regional Digital Integration Project (EA-RDIP) will be implemented from 2023-2028 to address connectivity needs for countries in the Horn of Africa region. The proposed project aims to advance the regional integration of digital markets in Eastern Africa through supporting cross-border connectivity, harmonization of data and e-commerce regulations and policies, and removal of trade barriers, with the vision of establishing a Single Digital Market (SDM). Regional efforts to move towards an SDM are envisioned to have economic and welfare gains to all participating economies and will be especially beneficial for smaller economies to tap larger regional markets for economic expansion. It is proposed for the project components to follow the SDM framework and for participating countries (Somalia and South Sudan in phase 1) to tailor each component for its investment and technical assistance needs.

24. Specifically in South Sudan, the EA-RDIP will support the Government of the Republic of South Sudan (GoSS) to establish digital connectivity and integrate with the regional digital market.

Scope and Objectives of the ESMF

25. The World Bank Group's Environmental and Social Framework (ESF) requires the preparation of a tool that analyzes project risks and impacts. An Environmental and Social Management Framework (ESMF) is used when concrete subprojects and sites are not known yet. The purpose of this ESMF is to ensure that the all site-specific activities or subprojects implemented under this project address and identify measures to avoid and minimize negative environmental and social impacts, as much as possible. Where impacts cannot be avoided, they are adequately identified, assessed and necessary mitigation measures designed and implemented following existing South Sudan environmental and social legislation (where available) and the World Bank's ESS.

26. The objectives of this ESMF are to provide procedures and methodologies for environmental and social impact assessments, reviews, approvals and implementation of the subproject activities funded under the project; specify appropriate roles and responsibilities, and outline the necessary reporting procedures, including managing and monitoring environmental and social impacts

related to subproject investments; determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF and subsequent E&S instruments as applicable; and establish the project funding required to implement the E&S requirements.

27. This ESMF includes a systematic procedure for a participatory process of environmental and social screening of the specific project areas and activities; a process to identity and prevent potential environmental and social impacts of the planned project activities; an assessment of potential risks and impacts caused by the planned activities; a standardized environmental and social management approach to deal with environmental and social impacts and risks resulting from the activities of the project; a subproject exclusion list; specific management plans/procedures for resettlement, GBV/SEA/SH issues, labour management, and cultural heritage; a grievance redress mechanism to handle potential complaints; a monitoring and evaluation system for the implementation of mitigation measures and actions; a plan for training needs requirements for planning and monitoring of the project; and an estimated budget to ensure that the project has the necessary resources to achieve the desired objectives, particularly those related to the preparation and implementation of subprojects. The requirements in this ESMF will be applied throughout the project life cycle.

Approach and Methodology

28. The approach to the preparation of this ESMF included in-depth literature / documents review, stakeholder consultations, and analysis of the socio-cultural and environmental data. The methodology also entailed analysis of the policy, institutional, regulatory and legal context of the project, prediction and analysis of potential social and environmental impacts and mitigation measures with a focus on significant cumulative environmental and social impacts.

29. In-depth Literature/Documents Review. The aim of this activity was to characterize the socio-cultural, environmental, policy and legal context of the project in South Sudan. Additionally, the review particularly of project documents was useful in identifying project activities, possible sites, and operational features to inform contributions to significant cumulative environmental and social impacts.

30. Stakeholder Consultations. This activity focused on key stakeholders that were identified in consultation with the GoSS and the World Bank. The main approach to stakeholder engagement and consultation included stakeholder workshops /meetings and in-person and virtual technical discussions were held during project preparations. This was to deepen understanding of the possible subproject contexts including the potential environmental and social risks attendant to the sub-projects.

31. Analysis of Policy and Legal Context. Relevant laws and regulations as well as internation conventions ratified by the GoSS were reviewed in order to allow the E&S instruments to be embedded in national and subnational legislation, in addition to the WB ESF. A gap analysis between local legislation and the ESF was undertaken and measures for the closure of existing gaps proposed.

32. Analysis of Socio-cultural and Environmental Context of the Project.. Data from secondary sources and from consultations / interviews were analyzed to provide the socio-cultural and environmental context and establish a socio-cultural baseline for the project.

Description of the Project

33. The Series of Projects (SOP) development objective is to promote the expansion of an integrated digital market across Eastern Africa by increasing cross-border broadband connectivity, data flows and digital trade in the region.

34. SOP Phase I development objectives are to establish the foundations for regional digital market integration in the Eastern Africa region by increasing access to affordable cross-border broadband services and strengthening the enabling environment for cross-border digital services. Table 2 shows the content of Phase 1 in South Sudan.

Table 2 South Sudan project components

	Allocation & Source of Financing (US$ million)			
COMPONENT	**Regional IDA**	**National IDA**	**Commercial Financing (Unguaranteed)**	**Total**
Component 1: Connectivity Market Development and Integration	35.5	13.0	20.0	68.5
1.1: Cross-border and backbone network connectivity	27.5	10.0	20.0	57.5
1.2: Last mile connectivity including in borderland areas	6.0	2.0	0.0	8.0
1.3: Enabling legal, regulatory and institutional ICT environment	2.0	1.0	0.0	3.0
Component 2: Data Market Development and Integration	1.5	3.0	0.0	4.5
2.1: Cybersecurity frameworks, infrastructure and capacity	1.0	1.0	0.0	2.0
2.2: Data exchange, governance and protection	0.5	2.0	0.0	2.5
Component 3: Online Market Development and Integration	4.0	1.5	0.0	5.5
3.1: Digital enablers for cross-border trade and service delivery	2.0	0.0	0.0	2.0
3.2: Research and education networks (RENs) and training for digital skills	2.0	1.5	0.0	3.5
Component 4: Project Management and Implementation Support	4.0	4.5	0.0	8.5
Component 5: Contingency Emergency Response	0.0	0.0	0.0	0.0
Total	**45.0**	**22.0**	**20.0**	**87.0**

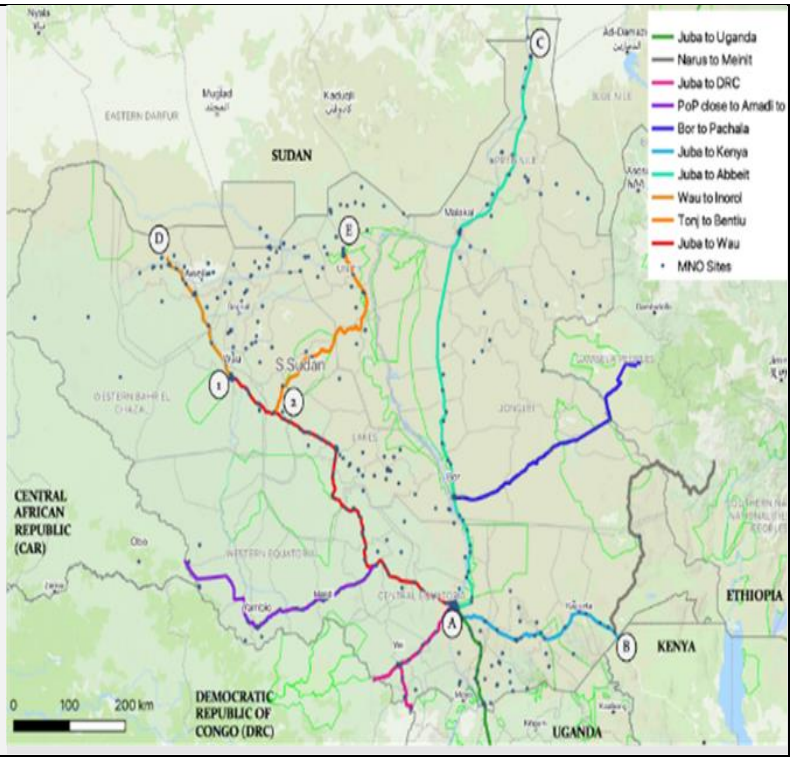
35. **Component 1: Connectivity Market Development and Integration**

36. **Sub-component 1.1: Cross-border and backbone network connectivity:** This subcomponent will support the deployment of key missing cross-border and backbone fiber links to improve the resilience, coverage, and integration of regional connectivity networks. It will support the deployment of up to 2,400 km (covering up to 11% of the population) with new fiber along key backbone and cross-border routes (see figure A5.2). Gap financing will be provided for the deployment of related new networks routes, using a range of modalities to crowd in private sector financing. Commercial providers are expected to co-finance, design, build, and operate network infrastructure deployed on an open access basis and at reasonable rates to support affordable service expansion and fair competition. Project financing will cover a) TA to (i) refine the technical

network design for prioritized routes, leveraging parallel deployment of linear infrastructure wherever possible[1] and informed by climate risks, (ii) develop technical specification for priority routes, embedding energy efficiency standards; and (iii) survey and provide quality assurance of deployed routes; b) TA to (i) define the modalities of gap financing that will seek to crowd-in and de-risk private sector investment, including the most suitable models for deployment, ownership, management and maintenance, given the local context, developing a commercial transaction manual ("Manual"), embedding core principles, and (ii) provide transaction advisory services to prepare related bidding documents and provide support for launching and administering the commercial transaction c) Public CAPEX contribution for the construction of priority routes, including both related passive (for example, ducts) and active infrastructure (fiber cores), subject to the adoption of a Manual.

Table 3 Priority fiber optic links

Route	Kms of Fiber	Additional population covered (%)
Juba to Nadapal/ Kenya border (A-B)	361	2%
Juba to Upper Nile border Northeast Backbone (A-C)	883	5%
Juba to Northern Bhar El Ghazal Northwest Backbone (A-D)	820	2%
Wau area to Unity Backbone (2-E)	357	2%
Total	**2,421**	**11%**



Source: World Bank and TMG. 2022. Horn of Africa Missing Links Study (P176181), World Bank (forthcoming) Digital Economy for Africa South Sudan (P176361)

37. **Sub-component 1.2: Last mile connectivity including in borderland areas.** This sub-component will providing catalytic funding to unlock further infrastructure deployment in unserved or underserved areas, which are highly correlated with higher poverty levels and climate vulnerability (including in refugee/IDP camps and their host communities, located in rural and borderland areas) and to connect public institutions along fiber route. Infrastructure financed will be deployed using a range of modalities, including reverse auctions, bulk purchase of capacity and/or licensing arrangements, that aim to maximize private sector financing. Project financing will cover: a) TA to identify sites to be connected and subject to market failure well as define modalities of the last-mile access program, as part of the development of a digital inclusion plan strategy and implementation plan; b) Transaction advisory services to prepare related bidding

[1] This includes deploying underground, aerial, or via OPGW along the power grid planned under the South Sudan Energy Access Project (P178891) or regional transport corridors such as under the Regional Transport, Trade and Development Facilitation Project (P148853) embedding rights of way, and dig-once obligations.

documents and provide support for launching and administering the models selected; c) Service contracts with commercial operators to pre-purchase capacity, connecting public institutions along fiber routes (government offices, schools, hospitals, and other public institutions); d) Public CAPEX financing for the last-mile access program, which may include establishing 4G broadband RANs, nomadic radio access network transceivers and low-cost online facilities such as Wi-Fi hotspots in borderland areas, for host communities and IDP/refugee camps, which can also act emergency response facilities.

38. **Sub-component 1.3: Enabling legal, regulatory and institutional ICT environment.** To support the modernization of policy, legal, regulatory, and institutional frameworks governing the telecoms sector, with financing for related TA, capacity building, training, and equipment acquisition needed to support reforms. Project financing will cover: a) TA, software and hardware to enhance regulatory framework related to QoS monitoring, spectrum management, mobile roaming, number portability, infrastructure sharing, type approval, and open access policy and license harmonization; b) Capacity building for the MICT&PS, Universal Service Access Fund (USAF) and ICT Authority through hardware, software and training support.

39. **Component 2: Data Market Development and Integration**

40. **Sub-component 2.1: Cybersecurity frameworks, infrastructure and capacity:** To strengthen and harmonize cybersecurity frameworks, build capacity for responding to cyber threats/cybercrimes and create greater awareness on cyber security, particularly in the financial sector. Project financing will cover: a) TA on developing a cyber security strategy, including review and update of existing legal frameworks; b) Financing hardware, software and systems for strengthening the CSIRT and digital forensic lab; c) TA and workshops to develop shared protocols and frameworks for regional cybersecurity cooperation, *inter alia* covering information sharing and mutual assistance arrangements; d) Financing support for implementation of National Cyber Security Awareness programs for civil servants, and a wider population including university students.

41. **Sub-component 2.2: Data exchange, governance and protection.** To improve the routing efficiency of data transmitted and build resilience for government data storage. Financing support to establish new internet exchange points (IXPs) in strategic locations and creating data-backups through public cloud subscription enabling also disaster risk management. Technical assistance will be provided on policies and institutional governance for data protection policies. Project financing will cover: a) TA on formulating guidelines, policies, institutional governance mechanisms for data protection including assessing options and the feasibility of backup and recovery centers; b) TA on the design, modality of operation and management of data, including data strategy, data classification, hosting, back-up/cloud hosting of government data; c) CAPEX financing towards establishment of IXPs to support the connectivity network; d) CapEx and OpEx financing for deploying resilient and agile hybrid (cloud and on-prem) data hosting solutions, consolidating data hosting for government and climate-proofing related solutions to prevent data loss.

42. **Component 3: Online Market Development and Integration**

43. **Sub-component 3.1: Digital cross-border trade, payment and service enablers.** To support developing digital public infrastructure to enable greater digital services and trade, through creating better interoperable back-end systems and a portal for citizen feedback/seeking recourse with an aim to expand adoption of e-services. Support to build readiness for partaking in regional trade initiatives will also be provided. Project financing will cover: a) TA and capacity building for the Ministry of Trade to facilitate to South Sudan's participation in regional trade agreements such

as the AfCTA and formulating a national trade strategy; b) Financing the establishment of an online complaints portal and call center to ensure effective channels for grievance redress and timely feedback from people who use/seek e-services; c) TA towards designing a nationwide enterprise architecture (NEA).

44. **Sub-component 3.2: Regional research and education networks (RENs), and training for digital skills.** To strengthen the higher educational network through establishment of a REN and integration with regional RENs allowing for network economies and knowledge transfer. Relatedly, leveraging enhanced capacity of universities through RENs and in partnership with the government, digital learning programs would be conducted for civil servants and university students. Project financing will cover: a) Financing CapEx for establishment of the South Sudan NREN, including through pre-purchase of internet international access, membership of the EU AfricaConnect 3 program, purchase of network equipment and campus WiFi networks; b) Financing collaboration with other NRENs in the region, notably KENET (Kenya), EthERNet (Ethopia) and Somalia Research and Education Network (SomaliREN) through regional capacity building initiatives (study tours, workshops) and regional access to open educational resources; and c) Financing design and implementation of performance-based grants aimed at expanding the availability of digital skills trainings in the country (including is specialized areas where skills gaps have already been identified, such as cyber security and data protection) through existing education institutes, targeting public sector employees and university students, with minimum targets for female beneficiaries.

45. **Component 4: Project Management and Implementation Support**

46. This component will finance the establishment and operations of the PIUs at MICT&PS for project implementation. Implementation would entail functions of project management and coordination, including procurement, financial management (FM), and M&E, as well as environmental and social safeguards management. Specifically, this component would consist of (a) operating and staff costs of the PIU, including the recruitment of expert consultants in key areas; (b) development and maintenance of a dedicated website for the project, and helpdesk for responding to citizen feedback/grievances; (c) support for stakeholder consultations and M&E, including collecting gender disaggregated data; and (d) coordination with the regional PIUs at EAC and IGAD level. This component will also support ESF compliance, with a particular emphasis on addressing the high security- and GBV-related risks associated with the deployment of infrastructure and civil works, including stakeholder consultation, robust grievance redress mechanism, development of site-specific assessments, and plans.

47. **Component 5: Contingency Emergency Response (US$0.0 million**).

Institutional Arrangements

48. For the implementation of the project, a new PIU will be established at the MICT&PS: Capacity building support will be provided through training. The establishment of the PIU will include the recruitment or appointment of one Project Coordinator, a Financial Management Specialist, a Procurement Specialist, a M&E Specialist, an Environment Specialist, a Social Specialist, a Security Advisor, a Gender Based Violence/Gender Specialist (as needed) and Technical Specialists with subject matter expertise in areas such as connectivity infrastructure, cybersecurity and data governance.

49. The responsibilities of the PIU will include project implementation, including overseeing project-related fiduciary functions, M&E and E&S commitments. It will also act as the single point of

contact for the regional PIU at the IGAD, and EAC, to facilitate collaboration on designing and implementing common activities. The PIU will submit project reporting to a Project Streeing Committee (PSC) as well as to the World Bank and engage with the Technical Committees (TC(s)) on specific matters requiring technical expertise/input on an ad-hoc basis.

50. Project Steering Committee (PSC): A PSC will be established, which will include the Deputy Minister of MICT&PS as Chair, the Undersecretary of the MICT&PS as Vice-Chair; the PIU Project Coordinator as Secretary; and members form representatives from MICT&PS, National Communication Authority (NCA), International Gateway, USAF, Ministry of Finance and Planning, Ministry of Roads and Bridges, Ministry of Transportation, Ministry of Higher Education, and Ministry of Trade and Industry as well as members of the regional PIU at IGAD and EAC.

51. The responsibilities of the PSC will include: (a) approval of the annual workplan and budget; (b) biannual review of project implementation progress; (c) review of procurement evaluations and approval; and (d) provision of strategic guidance and recommendations to the PIU and the TC(s) related to project implementation. The Terms of Reference (ToR) for the PSC, including the required participants for quorum, will be detailed further in the PIM, to be prepared before effectiveness.

52. A Technical Committee will be formed with members from Representatives from MICT&PS, NCA, International Gateway, USAF, Ministry of Finance and Planning, Ministry of Roads and Bridges, Ministry of Transportation, Ministry of Higher Education, and Ministry of Trade and Industry as well as members of the regional PIU at IGAD and EAC.

53. The responsibilities of the TC will include: convene participation from the private sector and civil society as well as from relevant agencies deemed key to facilitating successful implementation and stakeholder management to support any technical-level decisions that require broader agreement, resolve operational issues or facilitate M&E and supervision. The PIU will interact with TC(s) on an *ad-hoc* basis, and the TC(s) will report to the PSC. The ToRs for the TC(s), some of which may have only a short duration, as dictated by project implementation timelines, will be detailed further in the PIM.

2. POLICY, LEGAL, AND REGULATORY FRAMEWORK

54. This section focuses on the relevant legal and institutional framework for environmental and social management in South Sudan, as well as international conventions and standards. It also summarizes the relevant World Bank's Environmental and Social Standards (ESS) that guide the overall project's environmental and social management.

National Regulatory and Policy Framework

55. South Sudan became independent in July 2011 and adopted a new constitution, 'The Transitional Constitution' as well as some policies and legislation relevant to E&S standards. These policies and laws form a critical context for the Digital Integration Project in South Sudan and are illuminated here below.

56. The Transitional Constitution of the Republic of South Sudan, 2011, includes numerous provisions relating to the bio-physical and social environment. Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment, (2) that every person shall be obliged to protect the environment and (3) that future generations shall have the right to inherit an environment protected for the benefit of present and future generations. To achieve the foregoing objectives specific measures in place, include prevention of pollution and ecological degradation, promotion of conservation and securing ecologically sustainable development, and the use of natural resources while promoting rational economic and social development to protect the biodiversity of South Sudan. Additionally, Article 166 (6) requires local governments to involve communities in decision-making in the promotion of a safe and healthy environment.

57. Therefore, Article 166 (6) of the Transitional Constitution of the Republic of South Sudan offers the most explicit requirement for public consultation and stakeholder engagement during the preparation and implementation of development projects, including the Digital Acceleration Project in South Sudan. It is for this reason, and in line with ESS 10 of the World Bank's Environmental and Social Framework, that efforts were made to consult stakeholders during the preparation of this ESMF and further consultations at sub-project and/or project lot levels are recommended.

58. Another critical item, yet still in draft, in the national framework is the South Sudan Draft Environmental and Protection Bill (2013). The aim of the bill is to protect the environment and to promote ecologically sustainable development capable of improving the quality of life for both the present and future generations. Section 18 of the Draft Bill introduces the requirement for Environmental Impact Assessments (EIAs) for development projects. An Environmental Impact Assessment (EIA) is defined as a systematic examination conducted to determine whether or not a project will have any adverse impact on the environment and prescribe mitigation measures. The objective of the EIA is to ensure that environmental considerations are explicitly addressed and incorporated into the development decision-making process and to anticipate and avoid, minimize or offset the adverse significant biophysical, social and other relevant effects of development proposal, among others. Once the actual scope and specific sites of the project activities the Digital Acceleration Project EIAs will be prepared as appropriate.

59. In addition, Section 32, Cap 5, of the South Sudan Draft Environmental and Protection Bill (2013) introduces the requirement for Environmental Audits. An Environmental Audit is the systematic, documented, periodic and objective evaluation of how effectively environmental organization, management and equipment are performing in conserving the environment and its resources. The main objectives of an Environmental Audit are to: Assess how far project activities and programs conform with the approved environmental management plans as well as with the required environmental quality standards. To provide mechanisms for coherent implementation

procedures of a project so as to mitigate adverse environmental impacts and provide regulatory bodies with a framework for ensuring compliance with, and the performance of an environmental management plan.

60. Under Section 20, Cap 5, of the Draft Bill, a requirement for Environmental Monitoring is a requirement. Environmental monitoring is the continuous determination of actual and potential effects of any activity or phenomenon on the environment, whether short or long term. The bill mandates the line ministries to monitor environmental phenomena with a view to assessing possible changes in the environment and their possible impacts. In addition, they must monitor the operations of any project to determine its immediate and long-term effect on the environment. The respective ministries should compel the proponent to carry out a baseline survey to identify basic environmental parameters in the project area before implementation (except where a baseline survey has been carried out). Finally, they have to determine the parameters and measurable indicators to be used in monitoring of projects and conduct measurement of environmental changes that have occurred during implementation.

61. The Land Act, 2009 aims to promote a land management system that protects and preserves the environment and ecology for the sustainable development of South Sudan. It also provides for fair and prompt compensation to any person whose right of occupancy, ownership, or recognized long standing occupancy or customary use of land is revoked or otherwise interfered with by the Government in furtherance of a project.

62. The Land Act, 2009 reinforces the Government's recognition of customary land tenure. According to the Land Act 'Customary land rights including those held in common shall have equal force and effect in law with freehold or leasehold rights.' Community land can be allocated to investors as long as investment activity 'reflects an important interest for the community' and 'contributes economically and socially to the development of the local community'. It also requires that state authorities approve land acquisitions above 250 feddans (105 hectares) and create a regulated ceiling on land allocations.

63. Therefore, under the Land Act, 2009, the Digital Integration Project in South Sudan may traverse community land. In this case, the project proponent will have to demonstrate that the project reflects the interest of the community and will contribute to their economic and social development. Nonetheless, because the project is linear, the affected land will be far below the ceilings of 105 hectares that requires state approval.

64. The Land Act, 2009 also requires the Government to consult local communities and consider their views in decisions about community land. The Act also gives pastoralists special protection: 'No person shall without permission to carry out any activity on the communal grazing land which may prevent or restrict the residents of the traditional communities concerned from exercising their grazing rights'. ESS 5 on land acquisition, restrictions on land use and involuntary resettlement is therefore in line with the South Sudan Land Law.

65. The South Sudan Forest Policy (2012) was formulated to broadly protect the roles forests play in the ecological stability of rivers, lakes, swamps and agricultural production systems. It also ensures that there are optimal benefits from forestry and agro-forestry activities for food security and poverty alleviation among our rural communities. The policy integrates forest sector actions with rural development efforts to ensure that the rural population of South Sudan shall have access to basic needs such as sustainable household food security, shelter, wood fuel, safe clean water, sanitation and health facilities, primary education, good local governance, empowerment and self-reliance.

66. The Agriculture Policy Framework (2012-2017) of the Ministry of Agriculture, Forestry, Cooperatives and Rural Development focuses on the transformation of agriculture from a traditional/subsistence system to achieve food security through a science-based, market oriented, competitive and profitable agricultural system without compromising the sustainability of the natural resources for generations to come. In order to achieve the above, it developed key strategic objectives that include Priority policies that quickly boost agricultural production, the availability of agricultural inputs (including a credit facility at affordable cost) the rehabilitation and expansion of rural infrastructure including feeder roads and markets, the development and provision of research and extension services and market linkages. The Digital Integration Project in South Sudan will aim to preserve agricultural land and to mitigate any negative impact of the project on such land.

67. The Wildlife Conservation and National Parks Act (section 5) recognizes that wildlife constitutes an important national natural wealth and is part of the heritage of South Sudan and therefore needs to be conserved, protected and utilized for the benefit and enjoyment of all its people. Section 6 vests the administration and execution of the policy to the Secretariat headed by the Director General of the Secretariat of Wildlife Conservation, Environment Protection and Tourism. The Secretariat's objectives and functions are as follows: The conservation, management and administration of parks, controlled areas and other protected game reserves. The development, in cooperation with other competent authorities, of Tourism (based on the wildlife in South Sudan) and the development of other forms of rational utilization of the wildlife and environment resources. The control of hunting and management and preservation, conservation and the protection of wildlife and environmental resources along with the control of trade in protected animals and trophies. The promotion of education and dissemination of information about wildlife resources in South Sudan (In cooperation with competent authorities). The training of wildlife officers, non-commissioned officers and game scouts and other personnel of the Secretariat. The development and carrying out of research on wildlife and environmental resources with a view to their optimum preservation, conservation, management and protection. The management and administration of zoological gardens. Finally, the administration and enforcement of the provision of this Act and the attainment of its objectives.

68. The Public Health (Water and Sanitation) Act (2008) emphasizes the prevention of the pollution of air and water and also encourages improvement in sanitation. Key provisions include the protection of the sanitation of the environment, and it encompasses the measure to address the pollution of water and air. The following are measures geared towards control of pollution of water: Measures to prevent pollution of water for consumption; Measures destined to prevent pollution of potable water; Anyone who offers the public water to drink or human food, and which includes frozen food should ensure that the water conforms to the portability regulations; Management and disposal of hazardous wastes; and storage of wastes on the premises of waste generators. The Public Health Act (2008) also provides the need for the protection of pollution of water through the enforcement of regulations and measures necessary to combat all elements of pollution and protect the natural level of the environment and public health.

69. The Labour Act (Act No. 64 of 2017): The Act establishes a legal framework for the minimum conditions of employment, labor relations, labor institutions, dispute resolution and provisions for health and safety in the workplace. It further reinforces the right to equal remuneration for work of equal value as guaranteed by the constitution. Section 6(1) of the Labour Act provides that 'No person shall discriminate, directly or indirectly, against an employee or job applicant in any work policy or practice'. Section 6(2) also forbids discrimination by any Trade Union, Employers Association or Federation. Section 6(3) defines discrimination as 'any distinction,

exclusion or preference with the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation' based on a series of grounds including sex and pregnancy or childbirth. However, implementation of the act is weak.

70. While the Labour Act provides additional protections for children, it lacks clarity on prohibitions on the worst forms of child labor.

71. According to Section 12 of the Labor Act, the general minimum age for work is 14 (which is in accordance with ILO standards on minimum age where a country's economy and educational facilities are insufficiently developed). Section 10 spells out that forced labor is prohibited.

72. Article 12(2) allows children between the ages 14 and 18 to engage in the worst forms of child labor, violating international standards. The compulsory education age (13) is inconsistent with minimum age for work (14).

73. The South Sudan Access to Information Act (Act No. 65 of 2013) spells out that every citizen shall have the right of access to information. It focuses on the right to access information held by public bodies in South Sudan. The purpose of the Act is to give effect to the constitutional right of access to information, promote maximum disclosure of information in the public interest and establish effective mechanisms to secure that right.

74. The Environment Policy of South Sudan, 2016, spells out guidelines for a wide range of responses to environmental management. These include the promotion of effective, widespread, and public participation in the conservation and management of the environment.

75. The Child Act (Act No. 10 of 2008): The Child Act regulates the prohibition on child labor, the protection of children and young persons, and hazardous child labor.

76. The National Gender Policy (2012 – 2017): The goal of achieving gender equality in South Sudan is anchored in the country's Transitional Constitution and guided by a vision of equality as an inalienable right for all women, men and children, and gender equality as a human right. Article 16 of the Transitional Constitution states:

    - Women shall be accorded full and equal dignity of the person with men.
    - Women shall have the right to equal pay for equal work and other related benefits with men.
    - Women shall have the right to participate equally with men in public life.

77. The National Gender Policy aims at a country free from all forms of discrimination and violence, where women, men and children enjoy their human rights on the basis of equality and non-discrimination in all spheres of national life. It is underpinned by the commitment of the Government of South Sudan to uphold and protect the rights and dignity of all the people. Its achievement will be measured by the attainment of a rights-based legal and policy framework, equality before the law and access to justice for all without any discrimination based on gender, disability, age, religion, ethnicity, or any other social construct.

78. The policy's guiding principles reflect national commitments as enshrined in the Transitional Constitution and the Bill of Rights. It reaffirms the principle of women's rights as human rights and the recognition gender- based discrimination as a serious impediment to development. This policy emphasizes an integrated approach for addressing the challenges faced by the women and men of South Sudan, thereby avoiding piecemeal impact and results.

79. The institutional arrangement for the implementation of the policy is premised on the Ministry of Gender, Child and Social Welfare (MGCSW). The Ministry was set up as the lead institution for the National Gender Machinery, supported by the position of Presidential Adviser on Gender and Human Rights. The implementation of the policy is coordinated by the Republic of South Sudan through the MGCSW as the lead institution of the gender machinery with the mandate "to promote gender equality, social justice, and safeguard the rights and welfare of women, children, persons with disability and other vulnerable groups."

80. The MGCSW has the responsibility of coordinating a "gender management system" bringing together all the stakeholders, so as to ensure a coherent and coordinated approach to managing and implementing the policy. All the Ministry's five Directorates have a role in the coordination and implementation of this gender management system. This mandate is derived from the Transitional Constitution (2011), Articles 138 and 139, Presidential decrees of 26 June 2006 and 29 July 2009. Their roles in the implementation of the Policy are in line with the core functions of the ministry to:

- Develop policies and programs for the promotion of gender equality, child and social welfare.
- Mainstreaming gender equality, and disability into national development.
- Ensure the welfare and respect of the rights of persons with disabilities and socially
- vulnerable groups.
- Manage programs and institutions for children and social welfare.

International Conventions Signed and Ratified by South Sudan

81. The 1992 United Nations Framework Convention on Climate Change. The main purpose of the Convention is to establish methods to minimize global warming and in particular the emission of greenhouse gases. The Convention was adopted in 1992 and came into force in 1994. The implementing agency in South Sudan is the Ministry of Environment, Water and Climate. South Sudan acceded to the convention on 17 February 2014.

82. United Nations Convention on Biological Diversity. The Convention has three main goals which are: the conservation of biological diversity or biodiversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from genetic resources. South Sudan acceded to the Convention on 17 February 2014.

83. Vienna Convention on the Protection of the Ozone Layer: The Vienna Convention was an intergovernmental negotiation for an international agreement to phase out ozone depleting substance in March 1985. It ended in the adoption of the Vienna Convention for the Protection of the Ozone Layer. The Convention encourages intergovernmental cooperation on research, systematic observation of the ozone layer, the monitoring of CFC production and the exchange of information. The GoSS acceded to the convention on 12 January 2012.

84. The Ramsar Convention for the Conservation and Sustainable Utilization of Wetlands: The Convention is an international treaty for the conservation and sustainable utilization of wetlands, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value. South Sudan has been a party to the Convention since 10 October 2013. South Sudan has currently one site (Sudd or Al-Sudd) designated as Wetlands of International Importance.

85. Convention on the Rights of the Child: The Convention on the Rights of the Child from 1989 is the most comprehensive compilation of international legal standards for the protection of the human

rights of children. It acknowledges children as individuals with rights and responsibilities according to their age and development, as well as members of a family or community. This includes non-discrimination, the best interest of the child, the right to life, survival and development and the right to participation. South Sudan has been a party to the Convention since 23 January 2015.

86. ILO 182 Worst Forms of Child Labor Convention (1999). The convention calls for immediate action to prohibit and eliminate the worst forms of child labor. The predefined forms of child labor include all forms of slavery, trafficking of children, debt bondage or any other form of bonded labor, forced or compulsory labor, commercial sexual exploitation of children, prostitution and the production of pornography, as well as work that is likely to harm the health, safety or morals of children. South Sudan ratified the convention in 2012.

87. ILO Convention 138, Minimum Age. The convention provides for the possibility of initially setting the minimum age at 14 (12 for light work) where the economy and educational facilities are insufficiently developed. South Sudan has informed the ILO that it has set the general minimum age at 14 years. South Sudan ratified the convention in 2012.

88. Constitution of the International Labor Organization: The constitutional principle is that universal and lasting peace can be established if it is based on social justice. The ILO has generated such hallmarks of industrial society as the eight-hour work day, maternity protection, child labor laws, and a range of other principles. South Sudan has been a member of the ILO since 29. April 2012.

89. ILO Convention 098 on Right to Organize and Collective Bargaining. South Sudan ratified the convention in 2012. This is critical in managing labor relations during construction in the Digital Acceleration Project in South Sudan.

90. ILO Convention 029 on Forced Labor. The Objective of the convention is to suppress forced labor in all its forms. South Sudan ratified the convention in 2012. This is critical to the project given South Sudan's location in the Eastern and Horn of Africa Region where conflicts are rife and the refugee situation apparent so that the possibility of forced labor creeping into the project is apparent.

91. ILO Convention 100 on Equal Remuneration. The convention aims at equal remuneration for work of equal remuneration between men and women. South Sudan ratified the convention in 2012.

92. ILO Convention 111 on Discrimination. The convention calls upon states to enable legislation prohibiting all forms of discrimination and exclusion on any basis, including race, sex, religion, etc. South Sudan ratified the convention in 2012.

93. Convention on the Elimination of all forms of Discrimination against Women. CEDAW places explicit obligations on states to protect women and girls from sexual exploitation and abuse. South Sudan ratified the Convention on 3 September 2014.

94. Convention on the Elimination of all forms of Discrimination against Women. CEDAW places explicit obligations on states to protect women and girls from sexual exploitation and abuse, among other issues. South Sudan ratified the CEDAW in 2014. The accession to CEDAW enabled the country to address issues of customary law involving women's right to inherit and own productive assets, as well as their lack of voice and decision making in family and community matters and the denial of their right of choice to found a family especially in rural settings.

95. Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa in October 2017 and the African Convention for Protection and Assistance of Internally Displaced

Persons in Africa (The Kampala Convention). South Sudan made several reservations to key provisions including Article 6 that discourages polygamous marriages and Article 14 on reproductive rights - family planning and abortion.

96. UN Security Council Resolution 1325/2000 on Women, Peace and Security. The Government of South Sudan developed the National Action Plan 2015-2020 for the implementation of the UN Security Council Resolution 1325 on Women, Peace and Security.

97. The Beijing Declaration and Platform for Action (1995) is an agenda for women's empowerment, which consists of 12 areas of concerns, including women and the environment, women in power and decision-making, the girl child, women and the economy, women and poverty, violence against women, human rights and women etc... South Sudan committed to the implementation of the Declaration.

98. The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (Maputo Protocol) is an international human rights instrument established by the African Union, which came into effect in 2005. South Sudan has not officially ratified the Protocol but has passed the Parliamentary motion for ratification and through its Ministry of Gender, Child and Social Welfare and Religious Affairs has indicated reservations on several Articles.

World Bank Environmental and Social Management Framework and Relevant Standards (ESS)

99. The Environmental and Social Framework (ESF) sets out the World Bank's commitment to sustainable development as elaborated in the Environmental and Social Standards (ESSs) that are designed to support borrowers' projects with the aim of ending extreme poverty and promoting shared prosperity. A summary of relevant Environmental and Social Standards (ESSs) from the Bank's ESF are presented below.

100. The ESSs stipulate the requirements for borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The Bank believes that the application of these standards, focusing on the identification and management of environmental and social risks, will support borrowers in their goal to reduce poverty and increase prosperity sustainably.

101. The standards will:
(a) support borrowers/clients to achieve good international practice relating to environmental and social sustainability;
(b) assist borrowers/clients to fulfill their national and international environmental and social obligations; (c) enhance nondiscrimination, transparency, participation, accountability and governance;
(d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

102. The relevant ESS that the borrower and the project will meet through the project life cycle, are as follows:

103. ESS 1: Assessment and Management of Environmental and Social Risks and Impacts. ESS1 describes the borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve sustainable environmental and social outcomes consistent with the Environmental and Social Framework (ESF).

104. The E&S assessment will be based on current information, including a description and delineation of the project and any associated aspects and environmental and social baseline data at an appropriate level of detail sufficient to inform characterization and identification of risks and impacts and mitigation measures. The assessment will evaluate the project's potential environmental and social risks and impacts, with a particular attention to those that may fall disproportionately on disadvantaged and/or vulnerable social groups; examine project alternatives; identify ways of improving project selection, siting, planning, design and implementation in order to apply the mitigation hierarchy for adverse environmental and social impacts and seek opportunities to enhance the positive impacts of the project. The environmental and social assessment will include stakeholder engagement as an integral part of the assessment, in accordance with ESS10.

105. According to ESS1 the borrower will manage E&S risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project and the potential risks and impacts. The borrower is responsible for cascading compliance with standards along the chain of implementing partners, contractors and subcontractors. The Digital Acceleration Project is subject to ESS1 and will follow it through during preparation, design and implementation.

106. ESS 2 – Labor and Working Conditions. ESS 2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions. ESS2 applies to project workers including full-time, part-time, temporary, seasonal and migrant workers.

107. The Borrower has developed and will implement written labor management procedures applicable to the project (see Annex 7). These procedures assess the labor requirements in this project and set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS as well as requirements in the World Bank Environmental, Health and Safety (EHS) guidelines for managing occupational health and safety. The procedures address the way in which this ESS applies to different categories of project workers including direct workers, and the way in which the Borrower will require third parties to manage their workers in accordance with ESS 2. ESS 2 also requires a grievance redress system which allows workers to raise their grievances.

108. ESS 3 – Resource Efficiency and Pollution Prevention and Management. ESS 3 recognizes that economic activity and urbanization often generate pollution to air, water and land, and consume finite resources that may threaten people, 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. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with GIIP.

109. This ESMF includes sections on resource efficiency and pollution prevention and management. Assessment of risks and impacts and proposed mitigation measures related to relevant requirements of ESS3, including raw materials, water use, air pollution, hazardous materials and hazardous waste are included within scope of the ESMF, and ESIAs/ESMPs as

relevant. Additional efforts at E-waste management are included in the E-waste Management Plan.

110. ESS 4 – Community Health and Safety. ESS4 recognizes 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.

111. ESS 4 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. While not explicitly mentioned, prevention and mitigation of different forms of gender-based violence, specifically Sexual Exploitation and Abuse, is covered by ESS4. This ESMF includes mitigation measures for anticipated risks in relation to ESS4. In addition, a Security Risk Assessment and Management Plan (SRAMP) have been prepared to mitigate security risks. Additionally, a Gender-Based Violence (GBV) Action Plan has been prepared to manage GBV risks and impacts in the Digital Acceleration Project in South Sudan.

112. ESS 5 – Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement. ESS 5 avers that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

113. Experience and research indicate that physical and economic displacement, if unmitigated, may give rise to severe economic, social and environmental risks: production systems may be dismantled; people face impoverishment if their productive resources or other income sources are lost; people may be relocated to environments where their productive skills are less applicable and the competition for resources greater; community institutions and social networks may be weakened; kin groups may be dispersed; and cultural identity, traditional authority, and the potential for mutual help may be diminished or lost. For these reasons, involuntary resettlement should be avoided. For this Project, a Resettlement Policy Framework (RPF) has been prepared to guide planning of any resettlement impact that may arise. Any sub-project requiring involuntary resettlement will be screened out; all land status and absence of encroachments will be verified; and all Voluntary Land Donations (VLD) will be in accordance with all requirements of ESS5 and the respective provisions of this ESMF. VLD should not occur if it requires physical relocation, loss of structures or fixed assets on the affected portion of land which will be the basis for involuntary resettlement.

114. ESS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources. ESS 6 recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services.

115. ESS 6 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 units or airways 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. This ESS also addresses sustainable management of primary production and harvesting of living natural resources.

116. ESS 6 recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, 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.

117. Since exact location of construction sub projects under this Project are not known yet, there is a risk of construction activities encroaching upon local sensitive habitats. The project siting and design will ensure that sensitive habitats are not affected or disturbed. Also, the screening procedure will ensure proposed investments are designed and implemented in ways that avoid adverse impacts on biodiversity and promote sustainable management of natural resources.

118. ESS 7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. This ESS applies to distinct social and cultural groups. The terminology used for such groups varies from country to country, and often reflects national considerations. ESS 7 uses the term "Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities," recognizing that groups may be referred to in different countries by different terms. Such terms include "Sub-Saharan African historically underserved traditional local communities," "indigenous ethnic minorities," "aboriginals," "hill tribes," "vulnerable and marginalized groups," "minority nationalities," "scheduled tribes," "first nations" or "tribal groups."

119. ESS 7 contributes to poverty reduction and sustainable development by ensuring that projects supported by the Bank enhance opportunities for Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities to participate in, and benefit from, the development process in ways that do not threaten their unique cultural identities and well-being.

120. Key requirements under ESS7 include that the World Bank determines whether indigenous peoples/Sub- Saharan African historically underserved traditional local communities are present in or have collective attachment to the project area; and that the borrower develops a rigorous consultation strategy and identifies means through which the borrower undertakes effective consultation with people identified for purposes of ESS 7 on the project design and implementation.

121. ESS 8 – Cultural Heritage. ESS8 recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle. Given the planned construction under the Project, this ESS is applicable. Chance find procedures are included in this ESMF (See Annex 9).

122. ESS 10 – Stakeholder Engagement and Information Disclosure. 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.

123. The client will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project preparation process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.

124. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.

125. In consultation with the Bank, the borrower has prepared a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts. Disclosure of information shall be undertaken through the implementation of the SEP. The SEP also outlines the establishment of a functioning Grievance Mechanism (GM).

126. A gap analysis of the national legislation and World Bank ESF is presented here.

Table 4 Gap Analysis WB ESF and South Sudan legislation

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts			
Objectives of ESS 1 are: To identify, evaluate and manage the environmental and social risks and impacts of the project in a manner consistent with the ESSs. To adopt a mitigation hierarchy approach to: (a) Anticipate and avoid risks and impacts (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels (c) Once risks and impacts have been minimized or reduced, mitigated; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible. To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable and they are not disadvantaged in sharing development benefits and opportunities resulting from the project. To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate. To promote improved environmental and social performance, in ways which recognize and enhance borrower capacity.	Transitional Constitution of the Republic of South Sudan of 2011: includes numerous provisions in regards to the environment. Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment and (2) that every person shall be obliged to protect the environment and (3) that future generations shall have the right to inherit an environment protected for the benefit of present and future generations. Specific measures to ensure the objectives above include: The prevention of pollution and ecological degradation, the promotion of conservation and the securing of ecologically sustainable development and the use of natural resources while promoting rational economic and social development to protect the bio- diversity of South Sudan. Article 166 (6) expects local governments to involve communities in decision- making in the promotion of a safe and healthy environment. South Sudan Draft Environmental and Protection Bill (2013). Section 18 of the South Sudan Draft Environmental and Protection Bill introduces the requirement for Environmental Impact Assessments. Section 32, Cap 5, introduces the requirement for Environmental Audits. Section 20, Cap 5, introduces the requirement for Environmental Monitoring. The Environment Policy of South Sudan, from 2016, provides guidelines for a wide range of responses to environmental management. These include the promotion of effective, widespread, and public	While communities have to be included in decision- making, South Sudan laws only stipulate the need for environmental impact assessments. Social impact assessments, and a focus on the disadvantaged are not captured.	The ESMF lays out the general process for environmental and social risk mitigation of project activities, including social risks and impacts and a focus on vulnerable and disadvantaged groups. The ESMF also provides for monitoring of social risks and impacts in the same way that environmental ones are.

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
	participation in the conservation and management of the environment.		
ESS 2: Labor and Working Conditions			
The Objectives of ESS 2 are: To promote safety and health at work. To promote the fair treatment, non- discrimination and equal opportunity of project workers. To protect project workers, including vulnerable workers such as women, people with disabilities, children (of working age, in accordance with this ESS) migrant workers, contracted workers and primary supply workers, as appropriate. To prevent the use of all forms of forced labor and child labor. To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law. To provide project workers with accessible means to raise workplace concerns.	Labor Act, 2017 (Act No. 64 of 2017). The Act establishes a legal framework for the minimum conditions of employment, labor relations, and labor institutions Labor Act, 2017 (Act No. 64 of 2017) establishes requirement for a dispute resolution mechanism Labor Act, 2017 (Act No. 64 of 2017) chapter XI makes provisions for health and safety at the workplace Labor Act, 2017 (Act No. 64 of 2017) chapter VI says that no person shall discriminate, directly or indirectly against an employee or job applicant in any work policy or practice (discrimination is defined on grounds of race, sex, age, and religion). Labor Act, 2017 (Act No. 64 of 2017) section 12 provides protection for children. Minimum age for work is 14, and minimum age for hazardous work is 18 The Child Act, 2008 (Act No. 10 of 2008). The child Act regulates the elimination of child labor, protection of children, and young persons, hazardous child labor. The Labor Act (Act No. 64 of 2017) section 10 spells out that forced labor is prohibited. The Labor Act (Act No. 64 of 2017) Article 12 (2) allows children between the ages 14-18 to engage in labor.	South Sudan has no statutory minimum wage and enforcement of labor laws is minimal. Significant amounts of unskilled jobs are filled by immigrant workers. These require work permits. Minimum age for general work is 14, which is aligned with ILO Convention 138, on the minimum age for general work for a country whose economy and educational facilities are insufficiently developed. However, in practice children between the age of 10-14 are further employed in agriculture, industry and services, including in rock breaking, construction (building and transporting materials), making bricks. Article 12(2) allows children between the ages 14-18 to engage in general labor The Labor Act lacks clarity on prohibitions on the worst forms of child labor. Compulsory education age (13) is inconsistent with minimum age for work (14). Furthermore, children in South Sudan engage in armed conflict and in cattle herding. Children are further engaged in other worst forms of child labor, including in commercial sexual exploitation.	The project will comply with the Labor Act, but it will monitor wages paid. A minimum wage will be defined. The implementation of the LMP will be monitored by the PMU. The project will not deploy foreign workers under contractors and sub-contractors. The LMP spells out a Workers' GRM. Project will apply OHS management system that is consistent with the IFC General Health Guidelines Occupational Health and Safety. The Project will only allow deployment from the age of 18 (see LMP). Rigorous monitoring will ensure the application of the LMP. The Project will not allow any forced labor. It will hold all contractors liable to the implementation of the LMP. The PMU will have overall responsibility to monitor the implementation of the LMP. The Project will only allow deployment from the age of 18 (see LMP).

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
		Perpetrators have not been brought to justice.	Rigorous monitoring by the PMU will ensure the application of the LMP.
ESS 3: Resource Efficiency and Pollution Prevention and Management			
The Objectives of ESS 3 are: To promote the sustainable use of resources, including energy, water and raw materials. To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. To avoid or minimize project-related emissions of short and long-lived climate pollutants. To avoid or minimize generation of hazardous and non-hazardous waste.	The Constitution of South Sudan: Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment. (2) that every person shall have the obligation to protect the environment. (3) that future generations shall have the right to inherit an environment protected for the benefit of present and future generations. Specific measures to ensure the objectives above include: Prevention of pollution and ecological degradation; promotion of conservation; and securing of ecologically sustainable development and use of natural resources while promoting rational economic and social development so as to protect the bio-diversity of South Sudan		The project will promote the sustainable use of resources and avoid or minimize adverse impacts on human health.
ESS 4: Community Health and Safety			
The Objectives of ESS 4 are: To anticipate and avoid adverse impacts on the health and safety of project- affected communities during the project life-cycle from both routine and non- routine circumstances. 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.	The Public Health (Water and Sanitation) Act (2008) emphasizes the prevention of pollution of air and water and also encourages improvement in sanitation. Key provisions include the protection of the sanitation of the environment and encompasses the measure to address the pollution of water and air. The following are measures geared towards control of pollution of water: Measures to prevent pollution of water for consumption; Measures destined to prevent pollution of potable water; Anyone who offers the public water to drink or human food, and which includes frozen food should ensure that the water conforms to the portability regulations; Management and disposal	The national law does not adequately address the issue of GBV, and health and safety in the construction sites.	The Project will ensure that project activities do not pose any unintended negative consequences on communities, for example through increased GBV incidents. A GBV/SEA Action Plan will be implemented. The Project will utilize WBG guidelines on waste management in order to be fully compliant with this Act. Several measures will be undertaken, including contractors will develop road safety management plan and a

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
	of hazardous wastes; and storage of wastes on the premises of waste generators. The Public Health Act (2008) also provides the need for the protection of pollution of water through the enforcement of regulations and measures necessary to combat all elements of pollution and protect the natural level of the environment and public health.		health and safety Plan as part of the C-ESMPs to address the impacts on local communities of moving construction equipment; measures and actions developed to assess and manage specific risks and impacts outlined in the ESMF and subsequent ESMPs.
ESS 5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement			
The Objectives of ESS 5 are: To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives. To avoid forced eviction. For groups identified under ESS7, free, prior informed consent must be sought.	The Land Act of 2009 also provides for fair and prompt compensation to any person whose right of occupancy, ownership or recognized long standing occupancy of customary use of land is revoked or otherwise interfered with by the Government.	While the Land Act, 2009 provides for fair and prompt compensation, the entitlement criteria are not fully addressed e.g., squatters or mobile traders.	Any activities that result in involuntary resettlement or land acquisition will be avoided and/or minimized. The project will compensate squatters and mobile traders for the improvements and/or loss of business. Where land is donated by private owners, a land donation agreement process is implemented.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources			
The Objectives of ESS 6 are: 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	The Environment Policy of South Sudan, from 2016, provides guidelines for a wide range of responses to environmental management. These include the promotion of effective, widespread, and public participation in the conservation and management of the environment.	Specific treatment of sensitive habitats in projects is not addressed.	The Project will avoid any encroachment into any sensitive habitat and/or protected areas.

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
integrate conservation needs and development priorities.			
ESS 7: Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities			
The Objectives of ESS 7 are: To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. To avoid adverse impacts of projects on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, or when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts. To promote sustainable development benefits and opportunities for Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities in a manner that is accessible, culturally appropriate and inclusive. To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities affected by a project throughout the project's life- cycle. To obtain the Free, Prior, and Informed Consent (FPIC) of affected Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities in the three circumstances described in this ESS. To recognize, respect and preserve the culture, knowledge and practices of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to provide them with an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to them.	The Constitution of South Sudan, Article 166 (6) expects local governments to involve communities in decision-making in the promotion of a safe and healthy environment.	Since nearly all communities in South Sudan can be identified as 'SSAHUTLC', the laws in South Sudan don't identify these communities specifically. However, the laws stipulate the involvement of communities in decision- making processes.	Through the SEP the Project will ensure that consultations with all stakeholders are undertaken, and that all communities are participating in decisions on the development processes of the project.

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
ESS 8: Cultural Heritage			
The Objectives of ESS 8 are: To protect tangible and intangible cultural heritage from the adverse impacts of project activities and support its preservation. To address cultural heritage as an integral aspect of sustainable development. To promote meaningful consultation with stakeholders regarding cultural heritage. To promote the equitable sharing of benefits from the use of cultural heritage.	The Constitution of South Sudan, Art. 38 (1e) spells out to protect cultural heritage, monuments, and places of national historic or religious importance from destruction, desecration, unlawful removal or illegal export.		The Project will implement chance find procedures to protect cultural or archeological findings during project activities. The Project will further conduct community consultations (as per SEP) prior to project activities to ensure protection of other tangible cultural heritage.
ESS 10: Stakeholder Engagement and Information Disclosure			
The Objectives of ESS 10 are: To establish a systematic approach to stakeholder engagement that will help borrowers to identify stakeholders and build and maintain a constructive relationship with them, project-affected parties. To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be considered 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 disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format. 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.	The Constitution of South Sudan, Article 166 (6) expects local governments to involve communities in decision-making in the promotion of a safe and healthy environment. The South Sudan Access to Information Act (Act No. 65 of 2013) spells out that every citizen shall have the right of access to information. The purpose of the Act is to give effect to the constitutional right of access to information, promote maximum disclosure of information in the public interest and establish effective mechanisms to secure that right.	ESS 10 also stipulates te requirement for a grievance redress mechanism for activities	The project will implement stakeholder consultations throughout the lifetime of the project, as per the SEP. The project will implement a Project GRM to allow project-affected parties to raise issues and grievances that can be managed by the PMU.

WBG Environmental, Health and Safety Guidelines and Technical Notes

127. The project will further apply the WBG General and industry-specific EHS Guidelines[2] (including the *EHS Guidlines for Telecommunications*, https://www.ifc.org/wps/wcm/connect/25b87632-c01d-4a89-b149-21c1124730a4/Final+-+Telecommunications.pdf?MOD=AJPERES&CVID=nPtjCyb&id=1323152343828) from 2007, which are guidelines that contain the performance levels and measures that are acceptable to the WB and reflect good international industry practice. The industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. Where the national regulations differ from the levels and measures presented in these guidelines, the project will aim for whichever is more stringent.

128. The following Good Practice Notes were also consulted to ensure that mitigation measures developed are aligned with best industry practices: Addressing sexual exploitation and abuse and sexual harassment (SEA/SH) in investment; Projects financing involving in major civil works, 2020; Addressing Gender based violence in Investment Project Financing involving major civil works, 2018; Gender, 2019; Road Safety, 2019; and Managing the risks of adverse impacts on communities from temporary project induced labor influx, 2016; and assessing and managing the risks of the use of security personnel, 2018.

129. The WB Technical Note "Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints of conducting public meetings" (2020), has also been applied. This Technical Note makes due reference to the WHO technical guidance in dealing with COVID-19, including: Risk Communication and Community Engagement Action Plan Guidance Preparedness and Response; Risk Communication and Community Engagement (RCCE) readiness and response; COVID-19 risk communication package for healthcare facilities; Getting your workplace ready for COVID-19; and a guide to preventing and addressing social stigma associated with COVID-19.

[2] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

3. ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE

130. This section of the ESMF delves into the baseline characteristics of South Sudan. It covers the environmental, social, and cultural aspects relevant to the project.

131. The Republic of South Sudan gained its independence from Sudan 9th July 2011 following an overwhelmingly positive referendum. It is a landlocked country and has an estimated population of 8.2 m people and an area of 619,745 sq. km. Administratively, South Sudan is subdivided into 10 States (Central Equatoria, Eastern Equatoria, Jonglei, Unity, Upper Nile, Western Equatoria, Lakes, N. Bahr El Ghazal, Warrap, and Western Bahr El Ghazal States). Since South Sudan is located near the Equator, much of its landscape consists of Savanna grasslands with trees dotting the tall grass. South Sudan also has extensive swamp and grassland regions.

Environmental Baseline

132. Geography and Climate: 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 to the north by Sudan, by Ethiopia and Kenya to the east, Uganda and the Democratic Republic of the Congo (DRC) to the south and in the west by the Central African Republic. It occupies an area of 658,842 km2. The country is covered by extensive grasslands, wetlands and tropical forests. Its natural assets include significant agricultural, mineral, timber and energy resources. The climate is mostly hot and dry, with seasonal rains that allow for two or three harvests a year in the country's green belt. Apart from oil, however, its natural resources are largely unexploited and only 4.5 percent of its potential arable land is cultivated.

133. The major geographical features of South Sudan are the White Nile, which flows north from Central Africa's uplands and dominates the center 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 km^2, more than 15 percent 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.

134. 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, 2014). Rain typically falls unevenly across the country and the northeast is drier and precipitation increases towards the southwest.

135. There is a wetter green belt along the southern border that includes Western, Central and Eastern Equatoria, which has bimodal rainfall regimes from April to June and from August to October, enabling two or three harvests a year.[3] Annual rainfall in the green belt ranges from 800 mm to 2,500 mm.[4] Rain in the rest of the country occurs between April and October. It is often heavy and continual, leading to beneficial seasonal floods that improve soil fertility, grass and pasture growth and create fish ponds.[5] Rainfall in the arid zone can be as low as 300 mm per year.[6]

[3] BRACED, Building Resilience and Adaptation to Climate Extremes and Disasters, 2016, accessed at: http://www.braced.org
[4] Ministry of Environment, 2014.
[5] BRACED, 2016
[6] Ministry of Environment, 2014

136. Climate and Environmental Trends: Although South Sudan contributes little to global greenhouse gas emissions and its development trajectory promises to focus on clean energy, it is highly vulnerable to the impacts of rising temperatures and increased rainfall variability due to climate change. Between the 1970s and the 2000s, the country's central and southern regions experienced one of the world's highest increases in temperatures (as much as 0.4°C per decade). By 2060, South Sudan overall will get warmer by about 1°C over and above 2020 values.

137. This warming trend has already affected the country's rainfall patterns. Since the mid-1970s, its average precipitation declined between 10 to 20 per cent and the variability in the amount and timing of rainfall from year to year also increased. Average rainfall is expected to decline by 10-20 per cent for any observed warming of more than 1°C. The meteorological data shows that temperatures in South Sudan are rising and the weather is becoming drier[7] and it is likely that these changes are related to global climate change. Since the mid-1970s, average temperatures have increased by 1°C, while some regions have experienced temperature rises of up to 0.4°C per decade.[8] Warming trends lead to decreased evapotranspiration and declining precipitation. Since the mid-1970s, South Sudan has experienced a decline of between 10 to 20 per cent in average precipitation as well as increased variability in the amount and timing of rainfall from year to year.[9] There is also some evidence that the onset of rain now occurs one month later.[10]

138. These changes make South Sudan one of the five countries in the world most vulnerable to the impacts of climate change, which are likely to be devastating. Almost 80 per cent of households depend on crop farming or animal husbandry as their primary source of income, and these farmers and pastoralists rely heavily on seasonal rains, but if the current climate change trend continues, rain-fed agriculture may become unsustainable. In turn, loss of livelihoods will increase conflict over rights and access to water and natural resources. South Sudan needs to achieve political stability and legalize and implement its draft policies and plans so that it can act on its climate change adaptation and mitigation priorities.

139. If the trend continues, by 2025 it is likely that the drying experienced in the north-eastern regions of Upper Nile, Jonglei and Eastern Equatoria will extend across the country, potentially affecting Bahr el Ghazal, Tonj and Unity in the North and Central Equatoria in the South.[11] The Intergovernmental Panel on Climate Change regional models suggest that by the end of the 21st Century, most of Uganda, Kenya and South Sudan will experience drier weather in August and September.[12]

140. It is projected that average temperatures in South Sudan will rise by 1°C by 2060, with lower increases in the south.[13] Climate changes can, besides its direct impact on food production, also lead to increased conflicts over scarce resources: pastoralists are forced to move to where there is pasture and water, often leading to conflicts with other groups of pastoralists or with farmers. It is not known how climate changes will affect the Nile.

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[7] Richardson, T. (2011, 2011). Pastoral Violence in Jonglei. Washington, DC: Inventory of Conflict and Environment (ICE), Trade Environment Database (TED), American University; USAID. (2016). Climate Risk Profile. South Sudan. Washington, DC: United States Agency for International Development (USAID). Retrieved December 2019, from https://www.climatelinks. org/resources/climate-change-risk-profile-south-sudan

[8] BRACED, 2016.

[9] USAID, 2016.

[10] BRACED, 2016.

[11] BRACED, 2016.

[12] IPCC. (2014a). Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. International Panel on Climate Change.

[13] USAID, 2016

141. South Sudan recently prepared its first National Adaptation Plan for Climate Change in 2021. The Plan's primary objectives are to reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience; and to facilitate the integration of climate change adaptation into relevant new and existing policies, programmes, and activities.[14]

142. Agriculture: Agriculture is the backbone of the subsistence economy of South Sudan, accounting for one-third of GDP in 2009. About 81 percent of households cultivate land, about 22 percent of the population is engaged in fishing and 74 percent of the population keeps livestock. There is an estimated total of 38 million livestock in the country, compared to its human population of 12.3 million. A huge variety of crops are grown in South Sudan, where the diversity of soil and climatic conditions provide multiple options for different cereals, legumes, fruits and vegetables.

143. Climate and soils are primary determinants of the type of agricultural occupations that can be undertaken along with how, where and when they occur. Generally, mixed cultivation takes place in the Green Belt, and livestock rearing and extensive cultivation are practiced in the Iron- stone Plateau and semi-arid zones.[15]

144. In South Sudan about 80 percent of the population lives in rural areas where subsistence agriculture is the mainstay of people's livelihoods. The agriculture sector is characterized by small, hand-cultivating household units belonging to larger family aggregations practicing different combinations of rain-fed agriculture, livestock grazing and pastoralism, wild food harvesting and fishing.[16] About 81 percent of house-holds cultivate land, 74 percent own livestock and 22 percent engage in fishing.[17]

145. Although agriculture is the back-bone of the subsistence economy of South Sudan[18] production is very low. A 2012 analysis showed that the total value of agricultural production (or "realized potential") was about US$800 million (US$600 million from crops) or less than US$300 per hectare which is much lower than production in neighboring countries. In 2009, the agriculture sector contributed one-third of the country's GDP.

146. Individual households cultivate an average of between 0.84 and 2.4 hectares of cereals and other crops[19] which are usually grown in mixed and / or sequential plantings (mixed cropping and inter-planting). Sorghum and millet, the main cereal crops, are usually grown with sesame while root crops such as cassava are often inter-planted with groundnuts, maize, pumpkins or other vegetables. Most farmers practice shifting cultivation[20] an agricultural system based on field rotation rather than crops. Typically, crops are grown for several years or until yields decline appreciatively, and then the land is left to fallow.

147. Livestock: In addition to rain-fed farming, livestock keeping is the other dominant agricultural land use in South Sudan. Livestock are a productive livelihood asset, providing pastoralists with milk, which constitutes their main diet, but they also play a key role in socio-cultural life, especially for pastoralist peoples such as the Dinka, Nuer, Shilluk and Mundari.[21] For those who keep cattle, the animals are traditionally the most significant source of prestige, providing the currency for

[14] Republic of South Sudan, First National Adaptation Plan for Climate Change, Juba, 2021.
[15] European Union, (2016). Seed policy status in South Sudan. European Union, International Cooperation and Development.
[16] MOAF, 2013; EU, 2016.
[17] RSS, 2015.
[18] BRACED, 2016,
[19] UNDP. (2012). Investing in Agriculture for Food Security and Economic Transformation. United Nations Development Programme South Sudan.
[20] EU, 2016; UNDP, 2012,
[21] USAID, 2014; MOE, 2014.

marriage dowries, fines and other societal dealings, which account for about 80 per cent of cattle transactions.

148. Forests: The total area of forest cover in South Sudan is thought to be almost 20,000,000 ha, which represents about 30 percent of the country's total land area. Of this total, gazetted forest reserves account for 3.1 percent and plantation forests represent 0.1 percent. Plantations consist mostly of teak forests thought to be the oldest such forests in Africa and the largest plantations of their kind in the world. Acacia plantations for Gum Arabic are also important.

149. South Sudan's forests are in danger of disappearing; the annual deforestation rate is likely between 1.5 and 2 percent. The main drivers and pressures are population growth and the increased demand for fuelwood and charcoal, the conversion of forests to urban areas and uncontrolled fires and timber harvesting. This has led to the degradation or deforestation of parts of the country's natural forest areas and woodlands, localized soil erosion, biodiversity loss and altered hydrological and nutrient cycles. Generally, land degradation in South Sudan shows that 4.32 percent out of the country's land was degraded.[22]

150. Sustainably managing its forest resources offers South Sudan the opportunity to provide jobs and income and to maintain the ecological goods and services they provide. The Government aims to set aside about 20 per cent of natural forests as reserve forests to protect them from deforestation and it has an ambitious afforestation program, amongst other plans and strategies. It has also made ambitious commitments related to forests under its Intended Nationally Determined Contributions for climate adaptation and mitigation. However, on-going conflicts prevent the forests from being developed and sustainably managed to provide goods and services for future generations.[23]

Bio-physical Characteristics

151. According to Harrison's and Jackson's (1958) classification, South Sudan is savannah woodland (high and low rainfall), flood region, mountainous zone, and semi-desert. From a national perspective, the protected areas conserve a substantial portion of the terrestrial areas of South Sudan (10.4%), which is well above the African average (estimated at 9%), and protect an exceptionally high diversity of animals, habitats, and birds. The protected areas provide protection to a variety of habitats and species and their management will guard against any future soil degradation, deforestation, habitat fragmentation, and species loss. As such, they are an important source of carbon sequestration, watershed protection and biodiversity conservation with two endemic mammal species (Nile lechwe, estimated at 4,300 and white- eared kob, estimated at 800,000). An estimated 4,000 Shoebills (out of a global population estimated at between 5,000 and 8,000 individuals) are within South Sudan Sudd, with the main threats being habitat destruction, disturbance, and hunting. None of the project routes is likely to traverse the Sudd wetlands. Since the construction activities of the project will follow existing roads, no activity will encroach into sensitive habitats.

152. Out of the 22 Important Bird Areas (IBAs) in the Sudan, South Sudan comprises several including Boma, the Sudd, Southern and Bandingilo. The Leer and Panyikang counties comprise parts of the Sudd where hundreds of species of birds, out of which 12 are endangered such as the Shoebill and Black crowned crane, dwell here or use the area as an important stepping stone on their migration. Key large mammals of the forests and some woodland savannah areas include Waterbuck (*Kobus defasa*), Bushbuck, oribi, duiker, Uganda kob (*Kobus kob*), warthog

[22] Republic of South Sudan, Land Degradation Neutrality Target Setting. Final Report, March 2020.
[23] RSS, 2016.

(*Phacocoerus ethiopicus*), hartebeest (*Alcelaphus sp*.), giant eland (*Tragelaphus derbianus*), buffalo (*Syncerus caffer*), and various species of primates including the Black and White colobus monkey. A rich diversity of avifauna, reptiles, amphibians, and invertebrates also occurs here. However, the high levels of illegal hunting have decimated most of the wildlife populations in these areas.

153. South Sudan also ranks among the best timber wood exporting countries to the international market. Some of the states with best Teak and natural trees for timbers are Western Equatoria and Central Equatorial states. In Central Equatoria some of the existing Teak plantations are at Kegulu, the other oldest planted forest reserves are Kawale, Lijo, Loka West and Nuni. While Western Equatoria has its resources, Mvuba trees at Zamoi. However, several factors have contributed to the degradation of forest resources in Sudan leading to over-exploitation of the natural forests resulting in high rates of deforestation and forest conversion to waste land (Gafaar, 2011).

154. Overall, 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 savanna; Sudd swamps and other wetland, and Semi-arid region.

155. South Sudan's wide range of habitats supports a very rich diversity of both animal and plant species. However, the variety and number of different species is unknown. A glimpse of the richness of species is provided in a 2015 study by biologists who took 105,000 motion-controlled photos in an area of about 7,770 km2 of dense forest in the former Western Equatoria State. They found a total of 37 species, including four species never before documented in South Sudan: the African golden cat (*Caracal aurata*), water chevrotain (*Hyemoschus aquaticus*), red river hogs (*Potamochoerus porcus*), and giant pangolin (*Manis gigantea*). It also captured chimpanzees, bongos, leopard, forest buffalo, honey badger and the rare forest elephant (Howard, 2015; Patinkin, 2015). Forest elephants (*Loxodonta cyclotis*) are smaller than savannah elephants and tend to inhabit densely wooded rain forests. They play a crucial role in the ecosystem because they are voracious fruit eaters whose dung spreads tropical fruit tree seeds extensively. Numbers have declined dramatically over the last two decades however, primarily due to ivory poaching for international wildlife trafficking, and the species is critically endangered. Their presence in Western Equatoria is far to the north and east of forest elephants' previously known range (Patinkin, 2015).

156. The IUCN Red List of Threatened Species for South Sudan lists 4 critically endangered species and 11 endangered species. The hooded vulture (*Necrosyrtes monachus*), Rüeppell's griffon (*Gyps rueppellii*), white-backed vulture (*Gyps africanus*) and white-headed vulture (*Trigonoceps occipitalis*) are all critically endangered. Endangered species include three mammals: The Cape hunting dog (*Lycaonpictus*), common chimpanzee (*Pan troglodytes*) and the Nile lechwe (*Kobus megaceros*); six birds: Basra reed warbler (*Acrocephalus Griseldis*), Egyptian eagle (*Neophronpercnopterus*), lappet-faced vulture (*Torgostracheliotos*), Natal thrush (*Geokichla guttata*), Saker falcon (*Falco cherrug*) and Steppe eagle (*Aquila nipalensis*). Two plants, *Aloe erensii* and *Aloe macleayi*, while currently not threatened, are restricted to South Sudan (IUCN, 2016).

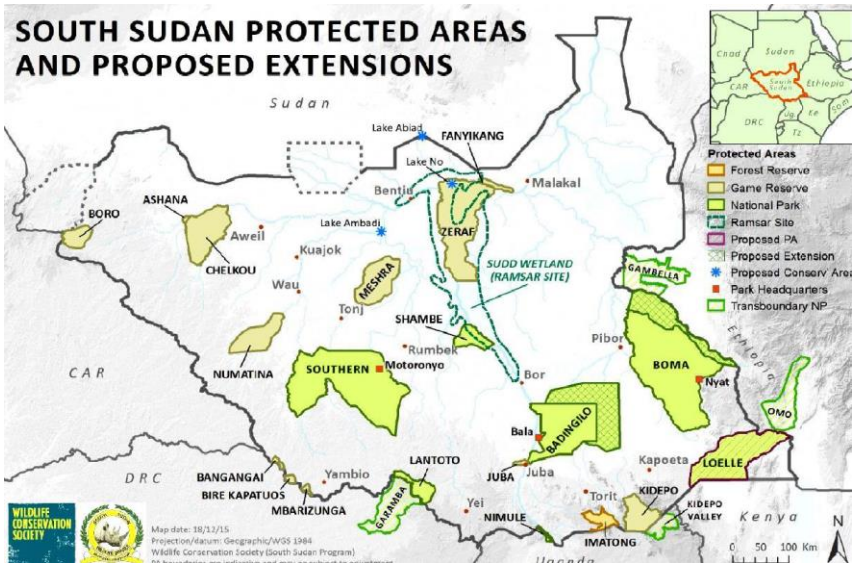

Figure 2: Protected Areas in South Sudan (source: Ministry of Environment, 2015)

157. South Sudan's remarkable biodiversity is of global significance – the Sudd swamp is one of the world's largest tropical wetlands and the country is home to one of the planet's greatest circular wildlife migrations. Biodiversity is also of extreme national importance since the country's ecosystem goods and services are the foundation of South Sudan's socioeconomic development.

158. Water Resources and Wetlands: 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 flood plains. 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.[24]

159. About 7 percent 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).

160. 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.[25]

[24] MWRI. (2007). Water Policy. Juba: Ministry of Water Resources and Irrigation (MWRI), Government of South Sudan. Retrieved November 14, 2016

[25] NBI. (2012). State of the River Nile Basin. Entebbe, Uganda: Nile Basin Initiative (NBI). http://sob. nilebasin.org/

161. In 2016, South Sudan's Ministry of Environment and Forestry reported that over the past two decades, water flow in a number of previously perennial rivers along the border with the Central African Republic had become seasonal. One of the main ecological impacts of decreased water flow is river siltation. A large part of the sediment created in the White Nile headwaters becomes confined in the Equatorial Lakes, held in the Sudd marshes or deposited along the river course downstream of the Sudd; thus, over its low-gradient course, the Nile's flow is very sluggish.[26] Other impacts include the congestion of irrigation channels, water-table declines, receding wetland areas and the loss of vegetation due to the lack of water. In turn, the loss of ecosystem goods and services is having adverse effects on the livelihoods of people who depend on wetlands within South Sudan.[27]

162. 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 inter- national boundaries. There is little information on the distribution and hydrology of these under-ground waters, or about the rates of water extraction and the impacts of human activities, such as potential over-abstraction and pollution.[28]

163. Water quantity and quality in South Sudan have declined in the past two decades. In a number of previously perennial rivers, for example, water flow has become seasonal. Lower water flows can lead to siltation. Large quantities of sediment are held in the Sudd marshes or deposited along the river course downstream of the Sudd. With municipal wastewater, sewage and industrial effluents running straight into water sources due to a lack of wastewater and sanitation management, water quality is declining in urban areas and contaminated water is responsible for recurring incidences of gastrointestinal diseases. Other significant threats to water resources include the construction of large hydroelectric dams and other related development schemes within the Nile Basin, the overuse of agrochemicals and spillage during oil exploration, which risk polluting the Sudd wetlands.

Socio-economic and Cultural Characteristics

164. According to the disputed results of the 2007 Population and Housing Census of Sudan, South Sudan has a total population of 8, 260,490 with an average household size of 6.3. South Sudan has a slightly higher male population (about 52%) versus females (about 48%). In terms of ethnic composition, there are many ethnic groups in South Sudan of which the Dinka, Nuer, Murle, Mundari, Toposa in Kapoeta and Boya are the main agro-pastoralist groups.

165. Sub-Saharan African Historically Underserved Traditional Local Communities (SSAHUTC): Most of the communities meet the criteria of SSAHUTC, as they have distinct identities and aspirations and are often disadvantaged by traditional models of development. South Sudan consists of a broad variety of ethno-linguistic groups. Those entail three sub categories of speakers of the Nilo-Saharan language family: speakers of West Nilotic languages (Dinka, Nuer, Atuot); speakers of Western Nilotic/Luo languages (Shilluk, Annual, Maban in Upper Nile and Ethiopian borderlands; Acholi in Eastern Equatoria; and Jur-Luo in Western Bahr el-Ghazal); and speakers of Eastern Nilotic languages (Eastern and Central Equatoria: Bari, Lotuho and Teso). Furthermore, there are speakers of the Niger-Congo language family, including the Zande in Western Equatoria.

166. In view of sociopolitical and cultural structures of these ethnic groups, for pastoralists, such as the Nilotic Dinka, Nuer and Atuot, the search for pasture shapes most of their socio-cultural life. They may migrate from homesteads on high grounds in the wet season to mobile cattle camps

[26] NBI, 2012.
[27] MOE, 2016.
[28] MWRI, 2007.

on the dried-out swamps in the dry season. Closely linked to this lifestyle is a social structure, which gives preference to an 'acephalous' ('headless') socio-political organization rather than a central authority. Similarly, systems of exchange are based on social connections established through marriage rather than open markets.

167. Farming communities, on the other hand, present a settled lifestyle. This usually goes along with central authority and/or hierarchical leadership structure, such as kingdoms or provincial chiefs (the latter were often instated by foreign rulers). For example, early accounts of the Zande kingdom around Yambio showed state-like elements, such as tribute paying, taxation or the death penalty. Both, the Shilluk and Anuak (Luo speakers) had systems of sacral kingship, which differed from the secular authoritarianism of the Zande state.

168. In many cases 'traditional' authorities were invented or established by outsiders in order to act as intermediaries for taxation, labor mobilization, and other forms of coercion. This was especially instrumental vis-à-vis the acephalous societies, as they were otherwise difficult to engage with or to rule over. This means that there needs to be a careful contextual analysis before entering a new area to create understanding about the actual representativeness of 'traditional authorities' for a community. Alongside these instated authorities existed other and older forms of authorities, which were based on local concepts of origin, power and authority.Many of the different forms of social structures in South Sudan are therefore based on the kinship concepts of a 'segment' or a lineage. Wealth is still a major marker in the social strata and the size of cattle herds – among the pastoralist societies - is a significant indicator for wealth.

169. Figure 4.2 demonstrates that the following states are relatively densely population in terms of distribution of population across the ten states: Jonglei (16.1%), Central Equatoria (13.5%), Warrap (12 %), Upper Nile (11.6%) and Eastern Equatoria (11 %). In contrast, Northern Bahr- El-Ghazal (8.7%), Unity (7.1%), Lakes (8.1%) and Western Equatoria (7.3%) are moderately populated. On the other hand, Western Bahr-El-Ghazal (4.7%) is the sparsely populated State.

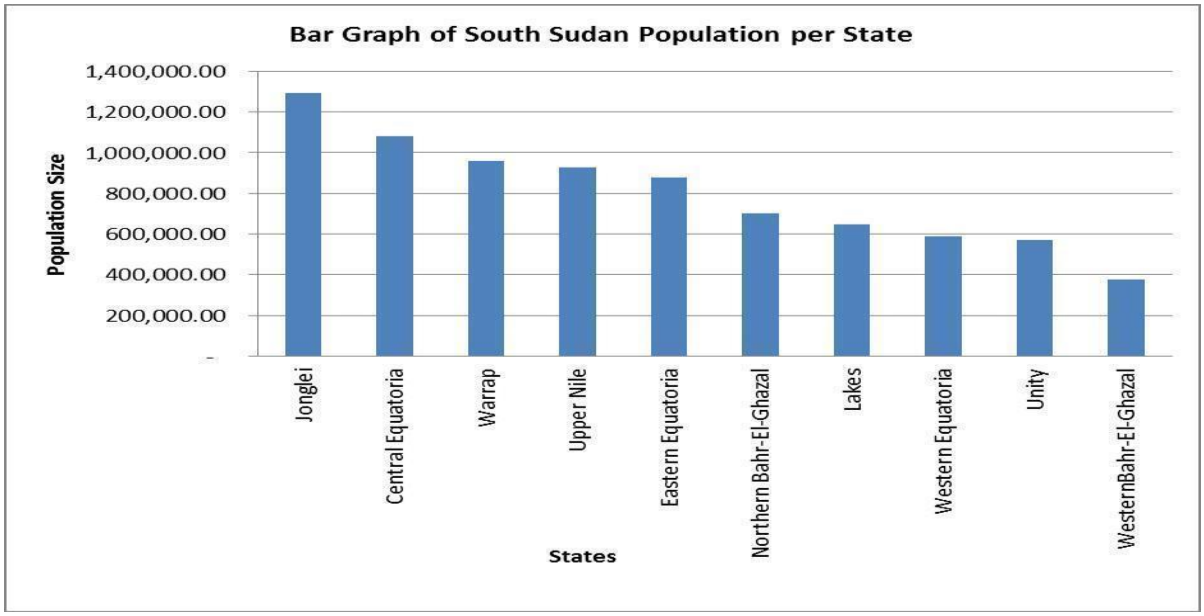

Figure 3: Distribution of Population by South Sudan States (Source: Population and Housing Census of Sudan, 2007)

170. South Sudan remains one of the least developed countries in the world. High levels of vulnerability arising from two decades of civil wars have forced a sizeable proportion of the population to rely on humanitarian relief assistance to meet their livelihood needs. The Gross National Income per capita is estimated to be less than $90 per year. Key education and health

indicators are among the lowest in the world. Infrastructure is virtually non-existent, and a public administration system has to be developed almost from scratch. Low levels of income and purchasing power, together with disruption associated with conflict and very limited infrastructure, have constrained economic activity and market development. The incidence of poverty has also worsened, from 44.7% in 2011 to more than 57.2% in 2015, with a corresponding increase in the depth of poverty (WB, 2015).

171. Inadequate transport infrastructure poses a major problem for movement of people and commodities within and between states. Although efforts have been made to rehabilitate some of the main trunk roads, the conditions of most of the main roads, especially in the wet season, hinder transportation of goods, particularly perishable products. High transportation cost is a disincentive to farmers in potential surplus production areas from expanding production. However, the situation of various socio-economic infrastructure and the livelihood conditions of the people of South Sudan have substantially changed since the signing of the Comprehensive Peace Agreement (CPA) in January 2005.

172. The livelihood system in South Sudan is predominately subsistence small-holder agriculture, among which about 12-15% of the population depends on fishing for their livelihoods (UNDP, 2012). Employment opportunities both in the public and private sector are few but are increasing due to urbanization. Petty trading also provides a source of income for many households in the rural towns and around market centres. Livestock production also provides an important livelihood base for large groups of people but is hampered by disease and environmental degradation. The road network is poor and many areas of the country are not accessible by road, particularly in the wet season, which provides a major obstacle for marketing and commercialization of agricultural production. Poverty escalates during the dry season and in most parts of the country periods of 3-6 months per year of food deficit is common. During these periods, most families move around for income generation, such as selling charcoal and doing casual labour.

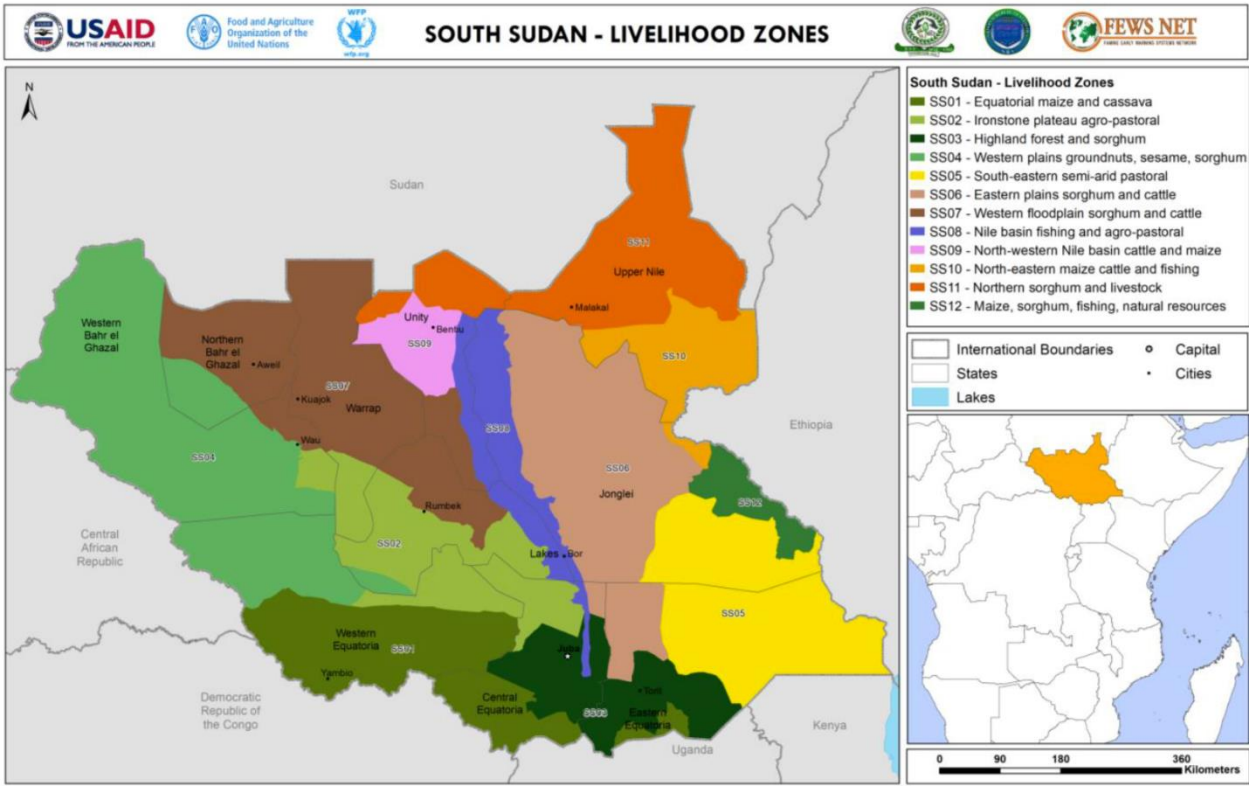

Figure 1 Livelihood zones in South Sudan

173. South Sudan has been undergoing rapid urbanization. This is where numerous ethnic groups come together, causing cultural change and disintegration. Tensions in towns emerge due to different social and economic strata rather than between members of different ethnic groups. However, others have observed that there are significant tensions between different ethnic groups in towns. In any case, this mix of society has led to the erosion of conflict resolution mechanisms usually applied within the group, while in some cases those mechanisms have been able to adjust, in many they leave conflicts unresolved (Pendle et al, 2012: 33).

174. The World Bank categorized the key features of the conflict in South Sudan as follows (The World Bank, South Sudan, 2019: 26).

Table 5 Features of Conflicts in South Sudan

Geography of Violence	Since 2016, the conflict has spread throughout the entire territory, particularly the formerly peaceful Equatorian states, although some locations are more stable than others.
Multi-actor	There has been a proliferation of armed groups and a weakening of command and control, meaning power-sharing, security commitments, rule of law and access is uncertain.
Control of territory	There are many different parts of the territory under influence of different groups; however, armed groups are not able to rigidly control territory or battle-lines.
Conflict at multiple levels	There are a number of different armed conflicts in the country – some relate to the fragmentation of the elites but many are local-level (e.g. over water or pasture resources)

Predation	Armed groups predate on resources from either the local population, such as livestock, or from aid agencies such as food stocks, vehicles or equipment.
Seasonality	The pattern is for the main warring parties to slow down offensives in the rainy season, although at the local level skirmishes and banditry can increase.
Ethnic identity	There are some 64 different ethnic groups in South Sudan; ethnic identity is instrumentalized by elites and has become part of inter-group armed conflict, making it a critical factor for determining equity.
Gender-based violence	Gender-based violence at the hands of both armed groups and partners/family members has reached epidemic levels, affecting as many as 65 percent of women and girls with great impunity.

175. Conflict can lead to the cancellation of programming, which has happened in South Sudan. Such cancellation can have negative effects on those expecting assistance. The World Bank study on the canceled 'Youth Startup Business Program in South Sudan' researched youth grant recipients, and the impacts of the cancellation of the program due to the outbreak of violence in late 2015. It found a strong reduction in beneficiaries' trust levels. Some of the beneficiaries that experienced cancellation were also less likely to migrate in order to escape from conflict activities, probably because they expected assistance (Muller et.al. 2019).

176. It is therefore important that the Project maintains strong communication links to explain to communities why project activities may be canceled. This can be done by targeting different population groups through different kinds of media. It will also depend on what type of communication may be possible in the case of conflict or ongoing violence. For example, it is more likely that it is possible to transmit messages through the radio rather than organizing community meetings.

177. Furthermore, the country is planning to hold General Elections in 2023, which could potentially lead to violence and insecurity again, given that the national factions are still in place. Nonetheless, peace talks and cross-party collaboration has been progressed during this year.

178. Education, especially for women and girls, is affected by GBV, including early marriage, together with conflict.. Secondary net enrolment rates are the lowest in the region at 6 percent for boys and 4 percent for girls. Similarly, only 18 percent of girls and 33 percent of boys complete primary education. Almost 31 percent of the schools have suffered attacks since 2013 and of all schools that were open since then, a quarter became non-functional by 2016 (World Bank, 2019).

179. The primary completion rate for the country as a whole, for both sexes, decreased by nearly half, from 46.1 percent in 2000 to 24.64 percent in 2010, the latest year for which data are available. This masks an acute difference between men and women: 31.7 percent for men, and 18.3 percent for women.

180. Completion also varies widely by income quintile even for females: the richest 20% of females living in urban areas in the country have a primary completion rate of 51.4%. This compares to 1.5% of the poorest 20% living in rural areas.

181. In 2018, literacy rates between women and men with 47.4 percent (47.9 percent respectively, for those aged 15-24. However, for the bulk of the population 15 and older, literacy rates diverge significantly by sex: 40.3 percent for men and 28.9 percent for women. This means the total illiterate female population is 1.2 times larger than that of men.

182. Government expenditure on education is both low—and unpredictable. At 4 percent of total government expenditure at the time of independence, spending on education rose as high as 4.1 percent in 2014, but dropped precipitously to 0.8 percent in 2016, and has yet to recover.

183. Women often face inaccessibility to health facilities for fear of conflict-related GBV. Many survivors of GBV continue to suffer from the physical and psychological impact of violence, and report feelings of depression, hopelessness, anxiety, and suicide and have difficulty focusing, sleeping, and performing routine tasks. Existing health services across South Sudan offer inadequate medical and psychosocial support to survivors[29]. In a CARE study it was found that among GBV survivors only 37 percent reported the incident to police or hospitals and received any psychological support[30]. Besides, GBV further entails the risks of becoming infected with HIV among women who have experienced violence maybe up to three times higher than among those who have not.

184. South Sudan holds statistics for the 11 of the 12 gender-related SDG 3 indicators on Good Health and Wellbeing (the one missing is on current tobacco use). Of these 11 indicators:

- Six are pointing towards negative pathways for health, namely, higher infant and under-five mortality, new HIV infections, adolescent births and poisoning.
- Maternal mortality and suicide rates are stagnating with unchanged values.
- Universal health coverage and the share of women of reproductive age with their family planning needs met with modern methods does not have trend data.
- And just one indicator is moving in the direction of progress: the proportion of births attended by skilled health personnel[31]

185. South Sudan's high maternal mortality rate is of deep concern. Women's low status and child marriages cause the high Maternal Mortality Rate in South Sudan, which is one of the highest in the world. Despite increasing births attended by skilled health personnel, at only 19.4 percent, the pattern points to too few medical personnel and facilities, and gender-based discrimination limiting women's access to medical treatment.

186. The prevalence of contraceptives is only 4 percent. Pregnancy at young age is a major cause of obstructed labor. Among teenage girls, 40.1 percent are married. Among women aged between 20 and 24, 51.5 percent got married before they reached 18.

187. HIV/AIDS prevalence was 3.04 percent in 2009. HIV prevalence is on the rise due to low levels of knowledge and high risk behaviors with movement of IDPs, refugees and foreign laborers. The cultural norms allow men to have multiple sexual partners and prevent women from negotiating safe sex. The use of condoms is limited.

188. Conflict-induced displacement has also altered family structures and affected the livelihoods of South Sudanese households. With very limited or no access to livelihood or productive assets and isolation from their kinship network, women face even higher levels of insecurity and marginalization. At the same time, and depending on the nature of displacement, women may struggle to fulfill both traditional male and female roles within the family in the absence of male relatives.[32]

[29] OHCHR (2019), Report of the Commission on Human Rights in South Sudan
[30] CARE (2014), The girl has no Rights, GBV in South Sudan.
[31] UN Women, South Sudan Country Data, accessed at: https://data.unwomen.org/country/south-sudan
[32] Strengthening Gender Outcomes in Social Protection and Poverty Focused Programs in South Sudan

189. Access to safe water and sanitation influences health, education, especially girls' education, and labor. Unclean water causes water borne diseases such as diarrhea and cholera. In 2010, estimates suggested access to safe water was 68% for South Sudan at the national level; however, rural access was likely half at 34%. The government aimed to improve access to safe water in the rural areas from the baseline of 34% in 2010 to 40% in 2013. According to World Health Statistics, it has improved to 59% as of 2015.

190. Water is fetched by women and girls. Adult women fetch water (85.6%, girls aged 15 years and below 8.8%) 231 while men and boys collect water for sale. Fetching water is time consuming work for women and girls, and long travel to water points puts women at risk of sexual harassment and sexual violence. Reducing time spent fetching water would increase time for economic activities for women.

191. In 2017, 62.8% of the population practiced open defecation—down from 71.1% in 2011, marking significant progress on this measure. The share of open water bodies—rivers, groundwater—with good ambient water quality stands a firm 100%.

192. The Covid-19 crisis has further impacted gender equality, as pre-existing differences were further exacerbated. For example, women who are the majority of the frontline health workers, careers at home and in the community, were overwhelmed with the responsibilities under the pandemic. Restrictions imposed by the government were experienced differently by different genders. Despite lockdowns, women continued to go to the markets to sell their produce for fear of loss of livelihood, placing themselves at greater risks.[33]

193. In 2021, UNHCR estimated 2.3 million refugees in South Sudan sought asylum in neighboring countries. Of 330,781 individuals, the majority are women—52.1 percent compared to 47.9 percent men[34]. They are displaced in five states, with 90 percent stemming from Upper Nile (173,924) and Unity State (124,883). Female-headed households represent 41,258 (58.3 percent) of refugee households compared to 29,500 male-headed households (41.7 percent).

194. However, there has been displacement throughout South Sudan's conflicted history. Displacement has mostly taken place from the rural areas, where people are unprotected, to towns, where there is increased provision of services and humanitarian aid delivery. Displacement has also been an important tactic of war used by different sides.

195. The movement of populations complicates the appearance of a community and shifts the dynamics in a given place. Often parallel administrative structures develop where 'returnees' settle in a place. Furthermore, displacement and returns put significant questions on the tenure, ownership and use of local lands. The remaining insecurity therefore keeps populations mobile and often does not allow for new permanent settlements and for the reconstruction of livelihoods.

196. One coping mechanism that has developed is that people often split family members to assess situations on the ground and to diffuse risks. While part of the family remains in a camp, another part may explore returning to the rural community site. In addition, for many returning means to entirely rebuild their lives, as often all assets have been destroyed and resources lost. For some, houses have been completely destroyed or they are still occupied by others.

[33] Ministry of Gender, Child and Social Welfare, A Rapid Gender Analysis of Covid-19, Juba 2020.
[34] UNHCR, South Sudan, accessed at: https://data2.unhcr.org/en/situations/southsudan

197. ***Cultural heritage***. These social structure are closely related to intangible and tangible cultural heritage, as it informs peoples' values, beliefs and traditions. Intangible heritage in South Sudan is vast, as every ethnic group relates to its own knowledge, artifacts and cultural spaces. Currently, the South Sudan Ministry of Culture jointly with the UNESCO Office in Juba is conducting an inventory of the country's intangible heritage. In terms of tangible cultural heritage, South Sudan has currently no UNESCO World Heritage site, but three sites are on a tentative list: the Boma-Badingilo Migratory Landscape; the Deim-Zubeir slave route site and the Sudd wetlands. None of these will be directly affected by the project.

Gender-Based Violence

198. About 65 percent of women and girls in South Sudan have been the victim of physical and sexual violence at some point in their lives, with the majority of them experiencing it for the first time before the age of 18.[35] In 33 percent of the cases, the violence was experienced during military raids from a non-partner while in 51 percent cases it was from an intimate partner. Early and forced marriage is another expression of GBV in South Sudan. About 52 percent of girls get married before reaching 18. This practice is also linked to poverty and ongoing conflict. Many families receive a bride price, which makes men think of their wives as lowly and thus the wives lose the rights to speak up for themselves.[36]

199. The patriarchal norms prevailing in South Sudan - especially among the rural population – are an expression of inequitable gender attitudes. South Sudanese women and men think that a husband is justified in beating his wife. The majority of male respondents (77 percent in Rumbek), and female respondents (73 percent in Juba City and 93 percent in Rumbek) agree that violence is justified in at least one of the following circumstances: If a woman goes out without telling her husband, neglects the children, argues with her husband or refuses to have sex.[37] Although there are signs of women being less accepting of GBV, the normalization of violence against women and men and existence of gender inequitable norms minimize the impact of observed attitudes.[38]

200. The culture of violence and impunity that has emerged from decades of conflict continues to provoke violent behavior toward women inside and outside their home[39]. Across the country, law enforcement services remain weak, and police are under-trained and under-resourced. Aside from the Police Special Protection Units (SPUs) that handle SGBV, police are given little training on how to handle cases of GBV and for the most part, they have little knowledge of women's rights.[40]

201. The economic downturn and loss of livelihoods caused by the conflict forced many women and girls to engage in sex to making a living. Even many female members of the armed groups report physical abuse or rape by fellow group members. Also, conflict and violence exacerbate the exposure and vulnerability of women to GBV. In particular, the proliferation of young male group gangs presents a high-level risk for women, as these groups target women and men in their attacks.

202. Sexuality issues and domestic violence are considered confidential and are not openly discussed, which promotes a culture of silence around GBV. In general, women and girls who experience sexual and domestic violence do not speak up. When they do report GBV incidents,

[35] UNICEF, 2018
[36] World Bank (2019), Strengthening Gender Outcomes in Social Protection and Poverty Focused Programs in South Sudan.
[37] World Bank (2019)
[38] The Global Women's Institute. (2019). Violence Against Adolescent Girls: Trends and Lessons for East Africa.
[39] World Bank 2019
[40] UNECA (2019), National Review of the Implementation of the Beijing Declaration and Platform for Action (1995). Republic of South Sudan.

findings indicate that most GBV cases are reported to community leaders (78.9 percent) and clan heads/members (71.5 percent) while few people report GBV cases to NGOs (14.7 percent), government (47.1 percent) and to religious leaders (38.3 percent). Qualitative findings indicated that community and clan leaders are nearer to the people and hold high levels of trust with community members. However, most social and government institutions that handle sexual and domestic violence cases are male-dominated[41], which discourages women and girls from reporting for fear of retaliation or social ostracism.

203. There are common GBV-related issues. First, women are more exposed and vulnerable to GBV due to conflict and poverty. Also, customs such as early marriage and bride price negatively affect women and position them in a subordinate manner vis-a-vis men. Second, lack of employment and sense of worth among young men is another factor that increases violence against women via armed groups. Women often experience a double burden as a result of the change in gender roles, while they have to fulfill traditional gender roles, they are also becoming heads of households and the main breadwinners for their families. Finally, land is a huge issue affecting South Sudan and IDPs in particular. Female returnees face particular GBV vulnerabilities related to claiming land rights without a male counterpart.

204. The COVID-19 pandemic has increased the GBV risks across the country, as the restrictions on movement have confined women to their homes and camps with their abusers.[42]

205. A IUCN 2020 study found GBV-environment linkages act as barriers to equitable, effective, rights-based conservation and sustainable development. Chief among these is access to and control of natural resources. In South Sudan, reports of GBV have been connected to illegal logging. The lack of legal frameworks in the aftermath of civil conflict in 2013 led to an increase in illegal timber exports—eroding livelihoods for women. Deterioration in agriculture markets forced women, mostly farmers, to find work in the illegal logging sector, where they face increased discrimination and risks of sexual violence working in forests.

206. Communities in South Sudan maintain rigid gender norms and roles. Disputes on marriage, property, and inheritance are often judged according to customary laws at the expense of women's individual rights. In a 2009-2011 study of 680 respondents in seven sites attitudes towards gender inequitable norms were assessed. 82% of women and 81% of men agreed that 'a woman should tolerate violence in order to keep her family together'. The majority, 68% of females and 63% of males, also agreed that 'there are times when a woman deserves to be beaten'. Women (47%) were more likely than men (37%) to agree that 'it is okay for a man to hit his wife if she won't have sex with him'. Agreement with gender inequitable norms decreased with education. Across sites, 69% of respondents knew at least one woman who was beaten by her husband in the past month and 42% of respondents knew at least one man who forced his wife or partner to have sex (Scot et al, 2013, An assessment of gender inequitable norms and gender-based violence in South Sudan, In: Conflict and Health 2013).

[41] Kenwill International Limited (2015). Gender Assessment Report Summary, Feed Fortifying Equality and Economic Diversification (FEED), Improved Livelihoods in South Sudan. World Vision South Sudan.
[42] Ministry of Gender, Child and Social Welfare, A Rapid Gender Analysis of Covid-19, Juba 2020.

4. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND PROPOSED MITIGATION MEASURES

207. This section identifies the potential risks and impacts that could arise from the activities proposed under the project. The identified risks impacts apply to the bio-physical, socio-economic, and cultural environment already discussed. These impacts can be positive or negative and direct or indirect. The attendant mitigation measures are also identified and discussed.

208. The assessment of risks and impacts is an iterative process underpinned by four key questions: a) **Prediction:** what change to the physical, chemical or social environment will occur if the project is implemented? b) **Evaluation:** what are the consequences of this change? How significant will its impact be on human and biological receptors? c) **Mitigation***:* if it is significant, can anything be done about it? and d)**Residual Impact:** is it still significant after mitigation? Where significant residual impacts remain, further options for mitigation will be considered and where necessary impacts are re-assessed until they are reduced. The figure below shows the methodology that will be used to assess risks and impacts.

Table 6 Risk assessment methodology

		Effects/Consequences				
		Negligible	**Small**	**Medium**	**High**	**Very high**
Probability of occurrence	Very likely					
	Likely					
	May occur 50% of the time					
	Unlikely					
	Very unlikely					

Overall risk rating of the impact	High		Substantial		Moderate		Low	

Identification and Assesment of Potential Environmental and Social Impacts

Positive Project Impacts

209. The project is expected to have significant positive impacts in South Sudan. These include reduced need for travel thereby minimizing the emission footprint because use of ICT that will reduce the need for movement of people from one location to another which helps increase efficiency as potential time spent on movement is reduced. Another likely positive impact is dematerialization and reduction of resource needs in records storage due to replacement of physical production and distribution of music, video, books, and software, etc., by the delivery of digital information over the network. This further reduces resource consumption and waste generation. The project is also likely to lead to enhanced chances at education for citizens and residents in the country and the new job categories that come with it, especially in the area of information technology and online work that accompany enhanced digital literacy, access to information, and service delivery.

210. The potential adverse environmental and social risks and impacts identified mainly relate to planned activities under Components 1 and 2. The Environmental and Social risk classification for the Project is *High* with the Environmental risk being *Substantial*, and the Social and SEA/SH risk being *High*.

Environmental Risks

211. Environmental, health and safety (EHS) risks result from Component 1, which will finance broadband connectivity infrastructure deployment. This could contribute to environmental damage, including soil pollution and deforestation. Also, downstream EHS risks can also result from regulatory and policy frameworks that may promote investments in new infrastructure for digital integration including competitive broadband market development. Components 2 & 3 could support investments in digital infrastructure & governance frameworks that can have various EHS risks during construction, and operation phases (e.g. those listed in the WBG EHS guidelines for telecommunications). Terrestrial & aquatic habitats, including forest reserves, may be altered primarily during the construction of communications infrastructure. Potential impacts to habitat may be more substantial during construction and installation of linear infrastructure such as long-distance fixed line cables, as well as access roads to other types of infrastructure along previously undeveloped land. Depending on their location, the installation of fixed line components, may require construction of corridors crossing aquatic habitats with the potential to disrupt watercourses, wetlands, and riparian vegetation. Related to telecommunications processes, the operation of certain types of switching and transmitting equipment may require the use of solar power and backup power systems consisting of a combination of batteries (typically lead-acid batteries). Operations and maintenance activities may also result in the generation of electronic wastes (e.g. nickel cadmium batteries and printed circuit boards from computer and other electronic equipment and backup power batteries). Poor e-waste handling and disposal could expose people to non-dioxin-like polychlorinated biphenyls, polycyclic aromatic hydrocarbons, polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans and dioxin-like polychlorinated biphenyls. Most of these compounds are endocrine disrupters & most are neuro-toxic. E-waste-related toxic elements can enter living organisms through air (e.g., open burning), soil (e.g. disposal) and water via ingestion (e.g., food chains contamination due to disposal and poor recycling processes). E-waste is resistant to biodegradation with strong

tendency to bio-accumulate in agricultural lands and be available for uptake by grazing livestock. Emissions from telecommunications activities may be primarily associated with the use of backup power generators, and the use of cooling and fire suppression systems. Construction of the digital infrastructure may contribute to environmental pollution such as air, construction waste, noise and water pollution. OHS issues in the telecommunications activities include elevated and overhead work, confined space entry, electrical and motor vehicle safety issues. There are community health and safety concerns if e-wastes are not properly managed. For example, people can be exposed to e-waste-related toxicants though air, soil, water via ingestion, inhalation, and dermal absorption. Increased incidence of communicable and vector-borne diseases may occur because of construction activities. Construction activities may also result in an increase in traffic-related accidents and injuries to workers and local communities. disposal) and water via ingestion (e.g. food chains contamination due to disposal and poor recycling processes). E-waste is resistant to biodegradation with strong tendency to bio-accumulate in agricultural lands and be available for uptake by grazing livestock.

Social Risks

212. Component 1 will finance broadband connectivity infrastructure deployment, potentially including submarine landing stations and terrestrial fiber optic backbones as well as mobile networks. Such activities are likely to require acquisition of land and potentially entail physical resettlement and /or economic displacement. The severity of any such impacts will depend on the existing land use, importance of sites for livelihoods, and the ability of landowners to utilize the land where cables are located post-construction. Given the land tenure situation, the project, where required, shall frame engagement (with households and community leaders) to ensure households with land use rights are not excluded from stakekholder engagement and project benefits, while negotiating with community leaders, hence mitigating the potential risk of elite capture. Project impacts on land tenure could differentially affect vulnerable groups, notably traditional local communities (as per ESS7), as well as women, people living with disabilities, and those with smaller land plots or with informal rights to the land they use. Similarly, construction of secure exchange and data storage facilities, proposed under Component 2, though likely to be smaller in terms of geographical footprint, may also result in land acqusition and induce resettlement impacts. In light of the possible impacts on communites meeting the criteria of ESS7, activities that would require the application of Free Prior Informed Consent (FPIC) will not be eligible for financing.

213. Expansion of digital infrastructure may result in moderate labor influx. The expected labor influx has the potential for impacts on community health and safety, including transmission of diseases, such as HIV/AIDS and Covid-19. Furthermore, there are risks associated with the use of security personnel during construction. Potential labor risks also include the use of child and forced labor, especially in relation to construction activities and the supply chain, as well as in relation to occupational health and safety, worker living conditions (it is expected that the labor influx will be housed in worker camps), hours of work, remuneration, and other terms and conditons of employment. Given the potentially remote and geographically distributed nature of activities, as well as security considerations, supervision of the labor and working conditions and community health and safety requirements may be a challenge. The project also proposes activities to harmonize policies and legal frameworks for data privacy, protection and security. These TA activities may have downstream environmental and social impacts. Establishing foundational ID systems, provision of public and private services online and data exchange all bring about risks associated with data security. Inclusion of the needs and interests of vulnerable groups, including communities meeting the criteria of ESS7,will be undertaken to ensure that

collected data will not be used as a basis for discrimination (e.g., on the basis of religion, ethnicity, sexual orientation and gender identity), and that data protection covers such groups, as needed.

Table 7 Potential E&S Risk and Impacts

Component	Sub-Component	Potential Risk and Impact	Risk Assessment
Component 1: Connectivity Market Development and Integration	1.1: Cross-border and backbone network connectivity 1.2: Last mile connectivity including in borderland areas	*Environmental*: - Increased susceptibility to soil erosion and landslides - Impacts on vegetation - E-Waste generation - Risk of soil compaction - Contamination of groundwater through waste disposal - Generation of debris - Use of limited or sensitively located local construction material, such as aggregate and timber - Overexploitation of resources (timber, water, sand, stones) - Generation of construction waste - Noise and vibrations - Exposure to electromagnetic radiation - Dust and air pollution - Community health and safety risks - Spread of communicable disease - Traffic related accidents and traffic interference - Collision of birds - Disturbance of flora and fauna (terrestrial and aquatic) during construction - Encroachment into any sensitive habitat and/or protected areas - Loss of precious ecological assets - Disruption of hydrology of natural waterways, regional flooding, and drainage hazards - Impacts on other sensitive environmental receptors - Risk of introduction of invasive species	
		- *Social*:	

		- Working at heights leading to body injuries and fatalities - Other OHS related risks, including risk of electrocution - Labor Influx - SEA/SH for project workers and project-affected persons - Child labor - Forced Labour - Conflict over employment - Lack of safety and security for project workers, project-affected persons and assets - Land mines along construction sites - Ethnic tensions among project workers and between project workers and communities - Violent attacks - Risks associated with hiring security personnel - GBV/SEA/SH for community members - Impacts on right to land use and assets through permanent or temporary land acquisition - Impacts on residential and commercial houses as well as auxiliary domestic structures such as waterholes, extra rooms, latrines etc… - Impacts on crops, economic and non-economic tress (in small quantities) - Impacts on community assets, such as water points - Impact on cultural properties, such as graves; public infrastructure (relocation of powerlines during infrastructure construction) - Loss of mobility and accessibility to individual land/asset (temporary). - Data protection issues for marginalized and vulnerable groups - Impacts on vulnerable and Marginalized Groups - Chance Finds - Impacts on tangible and intangible heritage - Encroachment into any sites of archeological, cultural, historical, or religious significance - Weak consultations and information disclosure	

		- Exclusion of vulnerable groups in consultations - Lack of access to GRM	
	1.3: Enabling legal, regulatory and institutional ICT environment	- TA activities lack compliance with the ESF - Weak consultations and information disclosure - Exclusion of vulnerable groups in consultations - Lack of access to GRM	
Component 2: Data Market Development and Integration	2.1: Cybersecurity frameworks, infrastructure and capacity 2.2: Data exchange, governance and protection	*Environmental*: - E-Waste - TA activities lack compliance with the ESF	
		Social: - Weak consultations and information disclosure - Exclusion of vulnerable groups in consultations - Lack of access to GRM - Lack of ata protection	
Component 3: Online Market Development and Integration	3.1: Digital enablers for cross-border trade and service delivery 3.2: Research and education networks (RENs) and training for digital skills	*Environmental*: - E-Waste - TA activities lack compliance with the ESF	
		Social: - Weak consultations and information disclosure - Exclusion of vulnerable groups in consultations - Lack of access to GRM	
Component 4: Project Management and Implementation Support		- TA activities lack compliance with the Environmental and Social Framework (ESF)	

Project Mitigation Measures and Management of Risks and Impacts

In line with WB ESS 1, for the elaboration and implementation of the environmental and social mitigation measures, the project is adopting the following mitigation hierarchy approach:

1. Anticipate and avoid risks and impacts;
2. Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels;
3. Once risks and impacts have been minimized or reduced, mitigate;
4. Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

The below generic Environmental and Social Management Plan (ESMP) lists the prevention, minimization, mitigation and compensation activities for each activity's risks and impacts. It disaggregates them by ESS. The generic ESMP presents standardized management and mitigation procedures for handling environmental and social risks resulting from the project in the local context. The generic ESMP should therefore serve as a reference on risks and impacts during construction and operational phases and in regards to the associated international industry best practices and mitigation measures that can be planned and implemented throughout the project life cycle. The items in the generic ESMP can serve as a template for site-specific mitigation and monitoring measures to be included in site-specific ESIAs and ESMPs. The preparation of specific ESIAs and ESMPs will require further site-specific social assessment.

Table 8 Generic ESMP

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
ESS1: Environmental and Social Assessment					
Lack of understanding of risks and impacts of sub-projects		Planning	Screen each subproject prior to implementation Prepare all relevant E&S instruments to mitigate risks and impacts Raise awareness of E&S risks	% of subprojects that have been screened # of additional E&S instruments prepared	IP and PIU / PIU
TA activities lack compliance with the ESF	The TOR for the respective TA initiatives lack in compliance with the ESF requirement in cases where the envisaged	Planning	Include all relevant E&S provisions into every Request for Proposals or TOR, and in every contract	% of RFPs or TOR contain all relevant provisions on E&S	PIU / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
	activities have direct or indirect relationship with the ESF				
ESS2: Labor and Working Conditions					
Working at heights leading to body injuries and fatalities	Workers will work at heights, haul cable for repaired sections, and splice cable among others. All these have a potential to pose several OHS risks including body injuries, work-related upper limb disorders.	Construction	Training of workers on Work at Heights, proper manual handling techniques Provision of appropriate PPE Provision of First Aid kits Inclusion of rescue and recovery plans and equipment to respond to fall OHS officer will be appointed in Contractor team Installation of quardrails with mid-rails and toe boards at the edge of any fall hazard area Proper use of any ladders and scaffolds Use of fall prevention devices, such as safety belts or fall protection devices such as full body harness	# of workers trained % of workers with appropriate PPE # of sites with Firs Aid kits available # of OHS officers available # of quadrails installed at respective sites # of fall prevention devices available	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
OHS related risks	Construction activities include a series of OHS related risks through a variety of hazards Lack of understanding of EHS risks and impacts and of mitigation measures leads to accidents and health impacts Lack of knowledge on monitoring risks and impacts and mitigation measures leads to accidents and health impacts	Construction	Train workers appropriately on OHS risks, hazards and safe handling of equipment and procedures, based on EHS Guidelines on OHS Provide appropriate PPE, continuous reminders to use PPE, use of signage and continuous supervision, based on EHS Guidelines on OHS Communicate and implement GRM/workers' GRM Develop and implement C-ESMP including OHS Implement Labor Management Procedures (LMP) (see annex 7) / especially in regards to OHS Include OHS requirements into bids and contracts	# of workers trained # of safety incidents # of GRM grievances filed # and type, and timeliness (as per GRM decription) in responses to worker grievances	PIU and COntractor / PIU
SEA/SH for project workers and project-affected persons	Risk of SEA/SH among the workforce	Construction	Adopt and implement LMP Singing of CoC by every worker at hiring. Adopt and implement of GBV Action Plan Training for workers on SEA/SH	% of workers that signed CoCs # of workers trained	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Risks of child labor	During construction activities, there is a risk of deployment of children.	Construction	Adopt and implement LMP Comply with minimum age set for all types of work (in compliance with national laws and ESS2) and document age of workers upon hiring Verify age of workers with communities where required Conduct a track record search of the contractors at the bidding process (record of health and safety violations, fines, consult public documents related to workers' rights violations, GBV/SEA/SH issues etc.) Raise awareness of communities/suppliers to not engage in child labor Consider ending of contract in case of violations	# of workers' violations # of existence/maintenance of a labor registry of all contracted % of workers with age verification # of awareness campaigns	Contractor / PIU
Risk of Forced Labour	Because of the conflict situation in South Sudan and the Horn of Africa Region there are likely to be refugees and IDPs in the project routes that may be vulnerable to forced labour.	Construction	Adopt and implement LMP Set up and implement Project GRM and Workers' GRM	# of workers' violations # of existence/maintenance of a labor registry of all contracted # of awareness campaigns	Contractor / PIU
Risks of conflict over employment	Discriminatory hiring practices leading to conflicts over provision of employment or contracts - the selection of project partners, local project staff, contractors or other local implementers can lead to grievances, including through perceptions of being left out due to clan, ethnic, gender, or other affiliations	Construction	Ensure Project GRM are accessible Introduce transparent procedures for hiring and advertise job opportunities widely Provide workers' GRM	# of cases field at GRM Availability of workers' GRM	PIU and contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Lack of safety and security for project workers, project-affected persons and assets	Especially since construction has to follow the most direct course of the fiber optic lines, workers may be exposed to security risks in some of South Sudan's highly insecure areas. This may also affect assets	Construction	Prepare Security Risk Assessment (SRA) Prepare local Security Management Plan (SMP) Prepare and implement Local Security Activity Plans – as per Project SMP (separate confidential document)	# of local security risk assessments # of local security management plans	PIU and contractor / PIU
Risk of land mines along construction sites	There are existing risks of land mines along the roads where cable will be laid, which could potentially injure workers	Construction	Conduct local security risk assessment Where applicable, deploy land mine clering company prior to start of construction works.	# of local security risk assessments conducted	PIU and contractor / PIU
ESS3: Resource Efficiency and Pollution Prevention and Management					
Increased susceptibility to soil erosion and landslides	Site excavation for fiber optic installation coupled with poor drainage can result in soil erosion and landslides on steep slopes. This may be likely in hilly areas of South Sudan where soils are loosened making them highly susceptible to erosion agents.	Construction	Restrict vegetation stripping to project sites to minimize project footprint and soil erosion. Avoid ground and vegetation stripping in steep Sloping areas to minimize soil erosion and risk of landslides slips. Use above ground/aerial pole to pole transmission in such prone areas Re-vegetation	# of trees removed # of trees re-planted	Contractor / PIU
Impacts on vegetation	This project will limit construction to existing road reserve using aerial pole erection, thus not impacting wildlife. However, minor clearances are expected in road reserve for the installation of fiber optics.	Construction	Vegetation clearance for aerial pole erection shall be limited to pole spots, minimizing vegetation loss. Clearance will be made only for areas needed for constructions	# of sites where vegetation had to be cleared	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Risk of soil compaction	Spoils and soil compaction through movement of machinery	Construction	Avoid working on wet soil Cover soils with vegetation or mulch	# of sites where soils are covered with mulch	Contractor / PIU
Contamination of groundwater through waste disposal	Waste effluents from construction site contaminate groundwater	Construction	Untreated waste effluents from the construction sites shall not be released into drinking water sources, cultivation fields, irrigation channels or critical habitats. Set up and implement GRM	# of sites where untreated effluents are released into drinking water	contractor / PIU
Generation of debris	Generation and dumping of debris (excavated soils)	Construction	Prepare waste management plan Contractor to prepare C-ESMP	Availability of waste management plan Availability of C-ESMPs	Contractor / PIU
Use of limited or sensitively located local construction material, such as aggregate and timber Overexploitation of resources (timber, water, sand, stones)	Construction activities, especially construction of access roads may exploit local resources	Construction	If timber is exploited, plant additional trees for recovery	# of additional trees planted	Contractor / PIU

Generation of construction waste	Construction activities will generate a variety of waste	Construction	Site waste management Plan will be prepared by the contractor Trenching wastes shall be used for backfilling Install equipment of high quality and proper standard as guided by South Sudan Bureau of Standards (SSBS); Sort and label waste at site of generation and have all waste transported to place of disposal by a licensed waste handler. Waste management shall form part of the induction process for all project implementation teams. Waste bins should be provided for construction workers to avoid littering of waste. Employ technologies that are least polluting and technically feasible Recycling of waste effluents will be carried out as far as possible and practical It will be ensured that the wastes are not released into any drinking water source, cultivation fields or critical habitat Waste effluents will be not be released into irrigation channels – based on EHS Guidelines on Wastewater and Ambient Water Quality All wastewater discharges are to meet applicable country laws/regulations and WB (EHSGs (General and sector-specific)	# of up to date waste management plans # of sites where waste is sorted and labelled # of sites with waste bins provided	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Increase of E-waste generated	The project is expected to significantly increase the circulation of smart devices and purchase a substantial amount of IT equipment (e.g. computers, servers). Mobile phones, end-of-life backup power batteries, and old IT equipment will need to be safely disposed of. This will increase the amount of e-waste generated and this calls for proper handling.	Construction and operation	Establish working agreement with e-waste recycling facility for E-waste collection, transport, recycling and dismantling of generated E-waste under the project. Carrying out sensitization campaign among local authorities, Operators of electronic devices, repairs for E-Waste collection, and transport to the e-waste collection centres under establishment in all districts. Adopt and implement E-Waste Management Plan	Availability of working agreement # of sensitization campaigns carried out	Ministry of Environment and Forestry, Relevant Regulatory Authority, and Contractor / PIU
ESS4: Community Health and Safety					
Labor Influx risks	Risks of labor influx into local communities, including GBV/SEA/SH cases, spread of communicable diseases etc..	Construction	Efforts shall be directed to ensuring that local communities benefit from employment. Provide information to local communities through stakeholder engagement Community awareness on GBV/SEA/SH Workers to sign Code of Conducts (CoC) Disclose to communities local workforce content requirement Investigate possibility of providing training to local communities on general jobs during the planning phase Maximize the use of local suppliers (for food, water, services etc.)	% of local workforce hired # of sensitization/awareness events within communities # of local suppliers used	PIU and contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
			All employees (including managers) will be required to attend training prior to commencing work to reinforce the understanding of HIV/AIDS, GBV and CAE. Subsequently, employees must attend a mandatory training course at least once a month for the duration of mobilization.		

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Noise and Vibrations	Noise and vibration may generate unacceptable disturbance to local communities where fiber optic cables are to be laid or access roads constructed. Vibration from compacting trenches can crack walls of structures adjoining work sites.	Construction	The Project should require contractors to use equipment and vehicles that are in good working order, well maintained. The construction activities will as much as possible be restricted to daytime only (7.00am- 6.00pm) when noise pollution is least felt to avoid disruption to the residents. Carry out community consultations before commencing the construction activities, informing the nearby population on the construction activities and possible impacts such as noise and additional vehicular traffic High level maintenance of the vehicles to reduce the vibrations Selecting equipment with lower sound power levels Installing suitable mufflers on engine exhausts and compressor components Equipment casing	# of vehicle maintenance logs available # of sites where construction is done after 6pm # of consultations carried out	Contractor / PIU
Exposure to electromagnetic radiation	The technology for the deployment of last mile connectivity and access may include the installation of relay antennas near schools, hospitals, administrative buildings and housing could expose the population to radio frequencies and constitute a long-term public health risk for the communities targeted by the project	Construction and Operation	If this technology is used, operators and contractor will be requested to comply with guidelines established by South Sudan regulatory specifications including distances between antenna and communities Adopt and implement E-Waste Management Plan	# of sites with appropriate distance between antennas and communities	Relevant Regulatory Authority, and Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Increase of E-waste generated	The project is expected to significantly increase the circulation of smart devices and purchase a substantial amount of IT equipment (e.g. computers, servers). Mobile phones, end-of-life backup power batteries, and old IT equipment will need to be safely disposed of. This will increase the amount of e-waste generated and this calls for proper handling.	Construction and operation	Establish working agreement with e-waste recycling facility for E-waste collection, transport, recycling and dismantling of generated E-waste under the project. Carrying out sensitization campaign among local authorities, Operators of electronic devices, repairs for E-Waste collection, and transport to the e-waste collection centres under establishment in all districts. Adopt and implement E-Waste Management Plan	Availability of working agreement # of sensitization campaigns carried out	Ministry of Environment and Forestry, Relevant Regulatory Authority, and Contractor / PIU
Dust and air pollution	Air pollution through dust and emissions from machinery and vehicles	.	Water will be spayed regularly-at least twice a day; Trucks carrying construction materials such as sand, quarry dust, laterite etc. will be covered with tarpaulin or appropriate polythene material from or to project site. Suitable wet suppression techniques need to be utilized in all exposed areas	% of vehicles that have been recently maintained % of vehicles with mufflers installed # of community consultations around planning	Contractor / PIU
Community health and safety risks	Community safety risks during construction in the vicinity of project works	Construction	Ensure that excavation sites are fenced off Ensure that safety signage is in place where applicable	% of excavation sites that are not fenced off # of cases detected where safety signage at the construction site have not been put in place	Contractor / PIU
Spread of communicable disease	Worker influx may cause the spread of communicable disease to community	Construction	Community awareness sessions on communicable diseases Implement COVID-19 protection measures (hand-washing stations, provision of face masks, etc..)	# of community awareness sessions held # of incidents reported where protection measures have not been followed	Contractor / PIU

Traffic related accidents and traffic interference	The installation of fiber optics and the construction of access roads will be done along existing roads and this may affect existing traffic and cause traffic jams and accidents.	Construction	Employ safe traffic control measures, including temporary road signs and flag persons to warn of dangerous conditions and children crossings. Where road use is restricted, signage and alternatives should be provided to the public Regular sensitization of the public on traffic safety in liaison with traffic department of the South Sudan Police. Constructor to develop a traffic management plan Training and licensing of industrial vehicle operators in the safe operation of specialized vehicles. Ensure drivers undergo medical surveillance Establish rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures Include traffic and road safety into the daily toolbox talks, emphasize safety aspects among drivers and improve driving skills of drivers Adopt limits for trip duration, e.g. 8 hours at a time and arrange driver rosters to avoid overtiredness Preassign routes by construction vehicles (project management, contractor, and traffic authorities) before construction starts. Regular maintenance of vehicles and use of manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction	# of traffic safety incidents # of sensitization sessions for communities # of signanges installed	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Ethnic tensions among project workers and between project workers and communities	Since construction works will require workers from outside working at the local level, this may cause tension between workers from different ethnic groups than the local communities	Construction	Transparency and communication of beneficiary selection criteria (SEP) Communicate and implement GRM Enforce CoC at workplace	# of awareness sessions	Contractor / PIU
Violent attacks	Risks for local communities during construction works through opposition groups or other militia	Construction	Implement Project SRAMP (separate confidential document) Implement Security Risk Assessment Prepare local Security Management Plan Prepare and implement Local Security Activity Plan	# of local security risk assessments # of local security activity plans	Contractor and PIU / PIU
Risks associated with hiring security personnel	Project activities may require the hiring of private or official security personnel as per SMP	Construction	Adopt and implement SRAMP Adopt and enforce standards, protocols and codes of conduct for the selection and use of military and security personnel, and screen such personnel to verify that they have not engaged in past unlawful or abusive behavior, including sexual exploitation and abuse (SEA), sexual harassment (SH) or excessive use of force; Ensure that PIU enters into a memorandum of understanding (MoU), with the Ministry of Defense setting out the arrangements for the engagement of the military and security personnel under the Project Ensure that such personnel is adequately instructed and trained, prior to deployment and on a regular basis, on the use of force and appropriate conduct (including in	Availability of MoU # of trainings for security personnel	PIU and contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
			relation to civilian-military engagement, SEA and SH, and other relevant areas), as set out in the Project Operations Manual, SMP and LMP.		
GBV/SEA/SH risks for community members	Labor influx heightens risks of GBV/SEA	Construction	Implementation of LMP, including signing of CoC by all workers at point of hiring Implementation of GBV/SEA/SH Action Plan	% of workers that have signed CoC	Contractor / PIU
ESS5: Involuntary Resettlement					
Impacts on right to land use and assets through permanent or temporary land acquisition	Access road construction or tower construction may lead to involuntary temporary or permanent land acquisition	Construction and operation	Adopt and implement RPF Identify alternative solutions where possible Prepare Resettlement Action Plans (RAP) Allow for Voluntary Land Donations where possible Set up and implement GRM	# of RAPs implemented # of complaints through GRM	PIU and Local Authorities / PIU
Impacts on residential and commercial houses as well as auxiliary domestic structures such as waterholes, extra rooms, latrines etc…	Construction activities may temporarily or permanently impact houses or other assets	Construction and operation	Avoid impacts through identification of alternatives Prepare and implement RAP, based on RPF or obtain VLD (see RPF) Ensure access to GRM Implement SEP	# of grievances filed through GR< # of consultation sessions held	PIU and Local Authorities / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Impacts on crops, economic and non-economic tress (in small quantities)	Construction activities may require the removal of crops or trees	Construction and operation	Adopt and implement RPF Prepare RAP or Livelihood Restoration Plan (LRP) Set up and implement GRM Conduct stakeholder consultations, with a special focus on vulnerable groups	# of RAPs or LRPs prepared and implemented # of grievances field through GR< # of stakeholder consultations implemented	PIU and Local Authorities / PIU
Impacts on community assets, such as water points	Construction activities may impact community assets , such as water points or others	Construction and operation	Adopt and implement RPF Prepare RAP or LRP Set up and implement GRM Conduct stakeholder consultations with a special focus on vulnerable groups		PIU / Local Authorities
Impact on cultural properties, such as graves; public infrastructure (relocation of powerlines during infrastructure construction)	While the construction of access roads can avoid cultural properties, this may not always be possible for the laying of fibre optic cables	Construction and operation	Avoid impacts through identification of alternatives Prepare and implement RAP, based on RPF or obtain VLD (see RPF) Ensure access to GRM Implement SEP	# of RAPs implemented # of grievances filed through GRM # of consultation session held	PIU and Local Authorities / PIU
Loss of mobility and accessibility to individual land/asset (temporary).	Construction works may impact access and mobility of local communities	Construction and operation	Avoid impacts through identification of alternatives Prepare and implement RAP, based on RPF or obtain VLD (see RPF) Ensure access to GR	# of RAPs implemented # of grievances filed through GRM # of consultation session held	PIU and Local Authorities / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
			Implement SEP		PIU / MICT & PS
Data protection issues for marginalized and vulnerable groups	Vulnerable groups may be exploited through insufficient data protection measures for end users	Operation	Continuous awareness programming for end users, especially vulnerable and marginalized groups on data protection measures	# of awareness sessions held	MICT& PS
ESS6: Biodiversity Conservation and Sustainable Management of Living Resources					
Collision of birds	Towers, antenna and aerial cables may have impacts on birds movement and may cause the death if mitigation measures are not taken	Construction and operation	Installation of flashing lights in relay antennas to avoid collision of birds during nights starless;	# of sites with flashing lights installed # of sites with deflection objects	Contractor / PIU
Disturbance of flora and fauna (terrestrial and aquatic) during construction	Project activities may lead to disturbances to local birds, reptiles and mammals; disturbance and loss of habitat from construction of trenching works and tower construction	Construction and operation	Ensure that noise control devices on vehicles and heavy equipment are properly maintained as another mitigation measure. Horn prohibited sign will be placed in nearby wildlife inhabited area Prohibit workforce from any wood logging, hunting Designating stockpiling areas Careful siting of the sub-project area to avoid any impacts on natural or critical habitats and wildlife Maintain the same route corridor for the machinery/trucks	# horn prohibited signs available # of wood loggin reported # of warning signs for wildlife available # of restoration plans	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
			Enforce speed limit/safe driving for the truckers to avoid any wildlife collisions Install warning signs on the road where wildlife had been observed Minimize the size of waste collection area Develop a restoration plan if needed		
Encroachment into any sensitive habitat and/or protected areas	Fibre optic cable may encroach sensitive habitats	Construction and operation	Any activities that can have significant adverse impact on critical biodiversity, ecologically sensitive areas and natural habitats be ruled out, as per the negative list (see Annex 1) Conduct site-specific environmental assessment and prepare Biodiversity Management Plans where appropriate Build capacity of implementing partners Adopt and implement E-Waste Management Plan	% of site-specific activities screened # of environmental assessments conducted # of Biodiversity Management Plans prepared # of capacity building sessions with implementing partners	PIU and Contractor / PIU
Loss of precious ecological assets Disruption of hydrology of natural waterways, regional flooding, and drainage hazards	Construction activities, especially the fibre optic cables and installations may disrupt ecological assets and natural waterways	Construction and operation	The use of firewood for fuel on any construction camps or areas will be banned The hunting of and consumption of game meat on construction sites shall be banned The cutting of flora for project purposes should be avoided where possible No removal of flora or wildlife in protected or sensitive areas shall be allowed For any plant removal or tree felling, four replacement plants should be replanted	# of sites where firewood for fuel is used # of hunting incidents reported # of replacement trees planted # of biodiversity assessments prepared	PIU and Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
			Preparation of biodiversity assessment and management plan where necessary		
Impacts on other sensitive environmental receptors	Infrastructure may traverse sensitive environmental receptors, such as swamps, bogs, thick vegetation, causing potential habitat fragmentation	Construction and operation	General avoidance of sensitive environmental receptors Keep increase in pollution level as small as possible	# of violations reported through GRM	Contractor / PIU
Risk of introduction of invasive species	Construction workers may introduce invasive species	Construction	Prevent introduction of invasive species, verify that plants brought in are not invasive, don't release any animals Detect invasive species early by training the community Respond rapidly to the invasion of invasive species and contain them	# of animals released # of trainings conducted	Contractor / PIU
ESS7: Indigenous Peoples and Historically Underserved Communities					
Impacts on Histrically Underserved Communities	Ensure project interventions are accessible, culturally appropriate and inclusive	Construction	Culturally appropriate stakeholder engagement Proper handling of Grievances	# of cases field through the GRM # of awareness sessions on GRM # of stakeholder consultations with particular focus on vulnerable groups	PIU and Contractor / PIU
ESS8: Cultural Heritage					
Chance Finds	Construction operations may encounter cultural and archaeological resources or chance finds. Construction can also reveal these buried resources, necessitating "salvage archaeology" for their recovery and protection.	Construction	Implement Chance Find Procedures	# of cases in which Chance Find procedures were implemented	Contractor / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Encroachment into any sites of archeological, cultural, historical, or religious significance	Fibre lines may cross cultural sites	Constructio n	Use of historical/scientific data and inclusive stakeholder engagement to ensure that works will not be located in graveyards or on land of spiritual or other cultural significance Activities will not be undertaken on sites that require application of FPIC Activities with potentional substantial adverse impacts on known cultural sites will be screened out	# of stakeholder consultations held	Contractor / PIU
Impacts on tangible and intangible heritage	Construction activities and fibre lines may impact tangible and intangible heritage	Construction and operation	Actitivies will not be undertaken on sites that require application of FPIC Activities with potential substantial adverse impacts on intangible heritage will be screened out In-depth stakeholder consultations with local communities will be undertaken as part of the screening process	# of community level stakeholder consultations held % of site-specific activities screened	
ESS10: Stakeholder Engagement					
Weak consultations and information disclosure	These conditions may affect stakeholders consultations during the project cycle: (i) Unfavorable public perception of the project (ii) Stakeholders, including the indigenous People and vulnerable people are unable to access project related information and project benefits. (iii) Stakeholders are unable to participate in the planning process of mitigation measures.	Construction and operation	Provide project related information as per SEP	# of stakeholder information session held # of stakeholder consultations held # of consultations focusing on vulnerable groups	PIU and IPs / PIU

Risks and Impacts	Cause	Phase: Planning / Construction / Operation	Proposed Mitigation and Optimization Measures	Monitoring indicator	Responsibility: Implementation / Monitoring
Exclusion of vulnerable groups in consultations	Stakeholder consultations may ignore vulnerable groups	Construction	Implement SEP Identify minority, marginalized and disadvantaged communities in project sphere of influence. Establish and maintain continuous liaison with the communities including marginalised groups to sensitize them on the project objectives and design. Use innovative communication means to reach the communities with information on the project, as per SEP Establish GRM structures in the communities and sensitize the communities on the project GRM. Apply local languages in communication	# of consultations focusing on vulnerable groups # of awareness sessions on GRM held # of documents translated into local languages	PIU
Lack of access to GRM	For some communities there may be a lack of access to the GRM dye to remoteness or lack of information	Construction	Set up and implement GRM	# of awareness sessions on GRM held	PIU

5. ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCEDURES

Screening Against Exclusion List

214. Every activity or subproject will first be screened against the exclusion list (see Annex 1). If a subproject contains activities that are listed on the exclusion list, either activities of the subproject will need to be changed accordingly or the subproject will be screened out.

Environmental and Social Screening

215. Then the subporject will undergo an environmental and social screening prior to any activity commencement. The environmental and social screening is intended to identify potential risks and impacts associated with proposed sub-projects in South Sudan. The first step of the screening will be the completion of a screening form designed to capture the necessary information about potential environmental and social impacts associated with the proposed sub-project activities. The screening form will have to be completed by the implementer and submitted to the PIU E&S Team for review. The subproject E&S screening form is listed in Annex 1. The PIU will provide oversight of all screening processes.

216. The E&S screening process involves: a) reconnaissance of the subproject areas/routes and their surroundings, b) identification of the major subproject activities and c) preliminary assessment of the impacts of these activities on the ecological, physicochemical and socio-economic environment of the subproject surrounding areas. The screening form may need to be reviewed and updated during the process to accommodate other variables.

217. If the subproject is rated 'low' with regard to environmental and social risks and impacts, no further action will be required. However, relevant mitigation measures listed in the above Generic ESM will need to be implemented. Subprojects that are classified as moderate may require the preparation of a simplified ESMP; while those classified as substantial or high risk will require a full ESIA and/ or detailed ESMP. They may also require a RAP linked to the resettlement impact anticipated. The types of ESMPs to be prepared will depend on the complexity of subprojects, and it can either be a simplified ESMP, a detailed ESMP done internally, or an ESMP that is prepared by a consultant. Internally prepared ESMPs will be prepared by the PIU E&S Specialists. It is expected that all construction subprojects will require a full ESMP, while most other activities do not require additional E&S instruments. The screening report will further help to determine which ESF standards are applicable and which steps need to be taken and which provisions or procedures apply, as laid out in this ESMF.

218. Where full or partial site- or activity-specific ESIAs and/or site-specific ESMPs are required, the costs are budgeted for in the budgets of the respective activity. The results of the assessments could change the assumptions made in this ESMF and thus also the justifications for some of the interventions as having moderate impact.

Preparation of Additional E&S Instruments

219. Depending on the results of the screening, the Environmental and Social specialists of the PIU or implementing partners will prepare the necessary documents in compliance with this ESMF. In accordance with South Sudan law the safeguards documents prepared will then be submitted to the relevant environmental and social official/authority by the PIU for review. Further details on Resettlement Action Plans can be found in the Project's Resettlement Policy Framework (RPF).

220. The subproject ESMPs will summarize the context, interested parties, compliance requirements, checks on compliance, risk and opportunities, activity-specific E&S objectives and specific targets, training plans, inspections, and monitoring actions and handling of incidents. The ESMP will inform the actions expected from the PIU and its contractors and the monitoring of their performance through the PIU.

221. ESMPs and ESIAs will be prepared in line with page 26/25 of the World Bank's ESF ('indicative outline of ESMP') and the project-specific requirements outlined in the Environmental and Social Commitment Plan (ESCP) of this Project. Stakeholder consultations will be conducted as part of the E&S screening and the preparation of the ESIA / ESMPs – as laid out in the Project SEP – and shall identify any E&S related concerns from project-affected parties.

Approvals

222. The PIU will be required to consult the Environment and Sustainable Development Directorate (ESDD) of the Ministry of Environment and Forestry (MoEF) for granting planning permits or approvals for sub-project related activities. In line with the ESF (ESS 1) all laws, regulations, and guidelines pertaining to planning an environmental protection in South Sudan must be followed through.

223. The evaluation, screening and scoping of activities and projects by the relevant planning authority may also conclude that certain subprojects or activities require that an ESIA be prepared and implemented. The documents are then submitted to the PIU E&S Team for review and approval. Documents based on a risk rating of the subproject that is subatantial or high risk are submitted by the PIU to the World Bank for review and clearance. After clearance, the ESIA is submitted by the PIU to the ESDD of the MoEF for approval. It is the ESDD that will issue an ESIA license for the sub-project implementation to commence.

Disclosure

224. All additional E&S instruments, except for Security risk related instruments will be disclosed to the public prior to construction through the various means listed in the SEP. Comments made by the public may have to be taken into account in amednments of the instruments.

Implementation

225. Once the instruments are cleared, the PIU will roll out their implementation through contractors and sub-contractors. The PIU will ensure that contractors are bound to implement all mitigation measures set out in the instruments and that they are cascaded down to potential sub-contractors and suppliers. The PIU will conduct monitoring and supervision of the implementation of E&S instruments through review of documentation and through site visits. It will further report against the mitigation measures and indicators set out in the respective E&S instruments on a quarterly basis, and integrate reports into the quarterly progress reports to the World Bank (see Section on Monitoring and Reporting).

6. MONITORING AND REPORTING FOR E&S IMPLEMENTATION

Regular Monitoring and Inspection for Compliance

226. The goal of monitoring activities will be to measure the success rate of the activities, determine whether interventions have prevented or mitigated negative risks and impacts and to determine whether further interventions are required or monitoring is to be extended in some areas. The goal of regular inspection activities is to ensure that subcomponent activities comply with the plans and procedures laid out in this ESMF and in potential ESIAs or ESMPs that have been prepared for specific subprojects.

227. A monitoring plan is presented above in Table 8 (as part of the Environmental and Social Management Plan). The Table spels out monitoring indicators for each generic mitigation measure and lays out the respective institution or authority to monitor the implementation of mitigation measures against the indicators. Indicators will also be disaggregated by gender where meaningful.

228. The main monitoring responsibilities and inspection activities will sit with the PIU, which will administer the overall project-related E&S monitoring and implementation as laid out in this ESMF. The PIU Project Coordinator will be overall responsible for the implementation of the E&S mitigation measures, as well as for monitoring and inspecting for compliance. The Social Specialist and Environmental Specialist in the PIU will handle all monitoring, inspection and reporting aspects on a day-to-day basis. E&S-related monitoring will focus on compliance of all implementing partners, contractors, sub-contractors and suppliers.

229. The Social Specialist and Environmental Specialist will assess the compliance of implementing partner, contractor and sub-contractor activities against the ESMF, RPF, the SEP, the SRAMP, ESCP and subsequent ESIA/ESMPs, and will report any non-compliance to the PIU Project Coordinator. Indicators are identified in the above generic ESMP (Section 4), they will be used as a baseline for assessing progress on the ESMF implementation.

230. The PIU and implementing partners will be responsible for the E&S screening of each subproject (level of screening to be identified on the basis of types of intervention), for ESIAs where applicable, and the the preparation of site/activity-specific ESMPs, monitoring of impacts, and administration of mitigation measures for subcomponent activities. The PIU or implementing partners will supervise the preparation of C-ESMPs through contractors and will be responsible for the monitoring and supervision of contractors and sub-contractors and suppliers. If monitoring and supervision results in non-compliance by contractors, the PIU or implementing partner will discuss and oversee the implementation of corrective actions of the contractor. The PIU and implementing partners will further commit to integrate stakeholder inputs into regular monitoring and reporting activities (as per SEP). As such, the PIU and implementing partners will require sufficient personnel with appropriate expertise to conduct these tasks. The PIU and implementing partners will allocate adequate financial, logistic and material resources to support E&S team in the implementation of the ESMF, and will ensure that its contractors, sub-contractors and suppliers have planned and budgeted for the respective mitigation measures.

Monthly and Quarterly Reporting

231. The PIU will provide quarterly reports covering environmental, social, health and safety (ESHS) performance of the project, including the status or preparation and implementation of ESIA/ESMPs, security commitments, stakeholder consultations, and results of the grievance redress mechanism (GRM). Implementing partners will provide the quarterly reports 15 days after each end of the quarter (see reporting format in Annex 10).

232. The PIU will receive reports from implementing partners. Together with its own monitoring data, the E&S Specialists will prepare the E&S inuts to the quarterly progress reports to the World Bank. These will include ESHS performance of the project, including but not limited to the implementation of the ESCP, status of the preparation and implementation of E&S instruments required under the ESCP, stakeholder engagement activities, and the functioning of the GRM. The GRM will further help track complaints and effectiveness of interventions, including those with environmental and social impacts and the quarterly monitoring reports will provide summaries and statistics on the GRM.

233. Upon completion of the project, the PIU will undertake an assessment of the success of the ESMF and include relevant information in the Implementation Completion Report (ICR). This ICR will be followed by the Bank's own ICR. If either of these assessments reveals that any key objectives of the ESMF were not achieved then follow-up measures will be developed to remedy the situation. This is also applicable for site-specific ESIAs or ESMPs.

Incident and Accident Reporting

234. Incidents should be categorized into 'indicative', 'serious' and 'severe'. Indicative incidents are minor, small or localized that negatively impact a small geographical area or a small number of people and do not result in irreparable harm to people or the environment. A 'significant' incident is one that causes significant harm to the environment, workers, communities, or natural resources and is complex or costly to reverse. A 'severe' incident causes great harm to individuals, or the environment, or presents significant reputational risks to the World Bank.

235. The World Bank needs to be notified promptly (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, communities, the public or workers, including, inter alia, cases of SEA/SH and accidents that result in death, serious or multiple injuries. The PIU will need to provide sufficient detail regarding the scope, severity, and possible causes of the incident or accident, indicating immediate measures taken or that are planned to be taken to address it. The report should also include any information provided by any contractor or supervising entity.

236. Implementing partners or contractors will report severe incidents to the PIU within 24 hours. In order to save time, the implementing partner may copy the World Bank into the message with the report.

237. Key information in the incident report should respond to the following questions (in case the below incident report form is not followed):

- *What was the incident? What happened? To what or to whom?*
- *Where and when did the incident occur?*
- *What is the information source? How did you find out about the incident?*
- *Are the basic facts of the incident clear and uncontested, or are there conflicting versions?*
- *What were the conditions or circumstances under which the incident occurred?*
- *Is the incident still ongoing or is it contained?*
- *Is loss of life or severe harm involved?*
- *How serious was the incident? How is it being addressed? How is the response?*
- *What, if any, additional follow up action is required, and what are the associated timelines?*

238. All other incidents need to be reported in the quarterly E&S report, with a Root Cause Analysis (RCA) and a detailed action plan, prepared by the contractor, implementing partner or the PIU, are included (see Annexes 6 and 10).

7. Institutional Arrangements for E&S Implementation

239. National level implementing arrangements. A national PIU will be established within the MICT&PS in South Sudan. The PIU will be primarily responsible for project implementation, including overseeing project-related fiduciary functions, M&E and E&S commitments. The PIU will also work with i) a Technical Committee (TC), comprising select MDAs and technical experts for resolving any technical issues, or related decision-making for implementation and supervision; and with ii) regional level PIUs (embedded in the Easy African Community (EAC) and the Inter Governmental Authority on Devleopment (IGAD) to collaborate on activities at the regional level that require country-level input. The PIU will report to a Project Steering Committee (PSC), which will provide the function of oversight and supervision.

240. Regional-National level collaboration at PIU, TWG and PSC level**.** Key channels will be set-up to ensure collaboration between the regional PIUs and South Sudan, including: i) at PIU level, where focal points in the national PIU will liaise with the regional PIUs on implementation of activities requiring country-level inputs; ii) Technical Working Groups (TWGs) at regional level will comprise of experts from member states who will interact with the regional PIUs on operational issues impacting South Sudan, iii) PSCs for the region will include national member states representatives to ensure their involvement in decision making and supervision, and (iv) similarly, representatives from EAC and IGAD will be represented in the South Sudanese PSC.

241. The MICT&PS will establish and maintain a PIU with qualified staff and resources to support management of ESHS risks and impacts of the Project including one environmental and one social risk management expert throughout the life of the project. In addition, the experts will be supported by one Security Specialist, one Environmental and one Social risk management consultant and other thematic consultants as required (e.g. in regards to Occupational Health and Safety (OHS), GRM, Gender Based Violence (GBV), etc. The Environmental and the Social Specialists will be responsible for the monitoring of the compliance with this ESMF, the SEP, the RPF and the Security Risk Management instruments. Where necessary, they will discuss corrective measures with implementing partners or directly with constructors. They will further prepare or receive additional E&S instruments, such as ESIAs or ESMPs, from implementing partners for sub-projects. The team will review these instruments and submit them to the World Bank for clearance.

242. Both, the Environmental and Social Specialists will receive quarterly E&S reports from implementing partners, or where the PIU directly contracts construction companies, from the construction company. Considering all inputs, they will prepare the E&S inputs for the Project Quarterly Progress Report to the World Bank. While the Environmental Specialist will in particular focus on any environmental, health and safety tasks, the Social Specialist will be responsible for any aspects regarding social development issues, labor risk management, land and resettlement, as well as stakeholder consultations and GRM. The Gender and the GBV Specialists will be dedicated to programmatic tasks, but will also ensure the implementation of the GBV/SEA Action Plan, as well as assist the Social Specialist with any GBV related grievances received through the GRM. Coordination with stakeholders is also the responsibility of the PIU with the implementing agency.

243. The PIU will flag any performance concerns to the Project Steering Committee (PSC).

244. Implementing partners. The PIU may contract implementing partners to implement some of the project activities. Implementing partner activities may incude construction and therefore implementing partners may hire contractors or sub-contractors or have suppliers. Implemeting

partners will sign an agreement with the PIU for the activities for which they have direct implementation responsibility. In the agreement the implementing partner will be required to maintain the necessary E&S staff to ensure compliance with all mitigatin measures listed in this ESMF that are relevant for the respective activities. Where the implementing partner recruits contractors or sub-contractors it will need to be ensured that all E&S requirements are cascaded down through procurement documents and contracts to contractors and sub-contractors. Implementing partners will submit monthly reports to the PIU as well as more detailed quarterly reports.

245. Contractors and sub-contractors. In some cases the PIU may hire contractors directly without an implementing partner. Contractors will be implementing E&S mitigation measures as laid out in the ESMF and subsequent ESIAs/ESMPs. Mitigation measures required will be included in all procurement and bidding documentation, including in Bills of Quantities (BoQs), and will be costed in agreements with the contractors. The contractors will be obliged to ensure that staff with ESHS experience and capacity is involved in construction works and can fulfill the reporting requirements on E&S, and can guide and supervise all workers, including community workers. Contractors will submit monthly reports to the PIU. The PIU will monitor and supervise the conractors and sub-contractors, based on monitoring indicators laid out in the respective ESIA or ESMP. Where non-compliance is identified, the E&S team will discuss and agree on corrective measures with the contractor.

Table 9 ESMF Roles and Responsibilities at national level

Role/Position Title	Responsibilities
MoICT&PS Project Coordinator	● Overall responsibility for the project documentation and implementation.
PIU Project Coordinator PIU Environmental & Social Specialist(s)	● Responsible for monitoring, supervision and reporting against all E&S requirements ● Review of additional E&S instruments ● Updates of existing E&S documents where necessary ● Preparation of ESIA or ESMP where necessary ● Monitor and supervise implementing partners and contractors.
Implementing Partner	● Comply with all Project E&S instruments ● Screen subprojects and prepare additional E&S instruments where necessary ● Adopt and implement additional E&S instruments ● Cascade all relevant E&S requirements down to sub-contractors ● Monitor and supervise sub-contractors
Construction Company	● Comply with all relevant E&S instruments ● Prepare C-ESMP
The World Bank	● Review and Clearance of all E&S instruments for subprojects rated substantial and high risks.

8. STAKEHOLDER CONSULTATIONS

246. A Stakeholder Engagement Plan (SEP) has been prepared for the project. The SEP seeks to define a structured, purposeful and culturally appropriate approach to consultation and disclosure of information, in accordance with ESS 10. It recognizes the diverse and varied interests and expectations of project stakeholders and seeks to develop an approach for reaching each of the stakeholders in the different capacities at which they interface with the project. The aim is to create an atmosphere of understanding that actively involves project-affected people and other stakeholders leading to improved decision making. Overall, the SEP will serve the following purposes: stakeholder identification and analysis; planning engagement modalities through effective communication, consultations and disclosure; enabling platforms for influencing decisions; define roles and responsibilities for the implementation of the SEP; define reporting and monitoring measures to ensure the effectiveness of the SEP; and elaborating on the role of grievance redress mechanism (GRM).

247. Stakeholder engagement is an integral part of project preparation and overall project design process and will continue throughout all phases of the project. While not every affected party will also be a beneficiary, it is crucial to disseminate information and engage with all stakeholders on project modalities, including local communities which are in the vicinity of construction activities. Stakeholders are categorized generally as 'project-affected' parties or those that may have an interest in the project, which will be identified as 'other interested' parties. Furthermore, it is important that all processes of information disclosure and consultations are as inclusive as possible to ensure that all sections of the affected communities will benefit from the project, and women, youth, refugees and other vulnerable groups are not excluded.

248. A variety of stakeholders have been identified for this Project: relevant national Ministries, business associations and digital businesss, universities and eductional centers, telecom and insurance providers, Internaet Service Providers, Telecom regulator and implementing authorities, construction companies, boma and payam repreentatives, and municipal representatives. Other interested parties are donors and international NGOs. As vulnerable groups have been identified: women and girls, vulnerable households, widows, youth, returnees / IDPs, refugeees, ethnic minority groups, and persons with disabilities (PWD).

249. Information disclosure to all potential stakeholders will rely on the following key methods: website, radio broadcasting, community meetings in coordination with local authorities (county governments, boma and payam leadership), phone communication (SMS), and notices at the payam and boma level. Information will be disclosed in English or the respective local language, where appropriate. Local authorities, such as traditional authorities, religious leaders, and county governors will be requested to inform communities in community meetings and through disclosure at project locations.

250. The PIU will ensure that women and other vulnerable groups are participating in consultative processes and that their voices are not ignored. This may require specific meetings with some of the above identified vulnerable groups at the community level, in addition to general community consultations. For example, women may be more outspoken in women-only consultation meetings than in general community meetings. Similarly, separate meetings will be held with young people or with ethnic minority groups for each subproject or activity. In view of promoting gender equality, it is most important to engage women's groups on an ongoing basis throughout the lifetime of the project. Women voicing their concerns and contributing in the decision-making process on issues such as local level public works should be encouraged, especially in

governmental or traditional committees predominantly consisting of men. All implementing partners and contractors are similarly encouraged to deploy female staff, in particular where staff interface with community members. GRMs are designed in a way that all groups identified as vulnerable (see below) have access to the information and can submit their grievances and receive feedback as prescribed.

Consultation and Stakeholder Engagement Already Conducted

251. A series of in-person and virtual technical discussions have been held during project preparations with a variety of groups and individuals. Subproject-specific stakeholder consultations will be undertaken (as per the SEP) once the subproject sites are known. These will include consultations on environmental and social risks and impacts as well as mitigation measures.

252. During the South Sudan Country Diagnostic Mission from 21-25 February 2022, the World Bank team consulted with a broad array of stakeholders, including from the Ministry of Information, Communications Technology and Postal Services (MICT&PS), the National Communication Authority (NCA), private sector entities, UN partners, the Chamber of Commerce, Industry and Agriculture, Ministry of Trade and Industry, Ministry of General Education, universities and educational centers, telecom providers, insurance providers, public and private commercial banks, digital public platforms, fintech players and digital businesses, and others (see Annex 12).

253. Stakeholders pointed out that South Sudan was the only country without an expansive national backbone fiber connection and lacked international redundancy. This means that internet penetration is one of the lowest in the world and broadband processes are among the most expensive. At the same time, the ICT governance and regulatory environment is not entirely conducive to attract infrastructure investments. Stakeholders indicated that there is high dependency on the single Juba route, international redundancy can be built through reviving the fiber link to Sudan, connecting to Kenya and subsequently connecting to Ethiopia, DRC and CAR. At the same time, the quality of internet and international capacity in the south can be improved through carrier-neutral data centers that also function as Internet Exchange Points (IXP).

254. Asked about digital skills existing, stakeholders indicated that without national statistics or third-party surveys it is difficult to tabulate the level of digital literacy. Consultations revealed this is low due to several challenges in the sector. While an ICT curriculum is introduced at schools, this is the only one at secondary level and the majority of children remain out of school in any case. The curriculum provides basic skills in computer science; however, there is a lack of computers and ICT infrastructure at schools. The majority of children are out of school in South Sudan, and thereby there is limited access to any training on digital skills.

255. Consulted universities stated that they are offering ICT courses at the undergraduate level. However, this service is mainly focused on Juba. The University of Juba and the Kampala University both have basic ICT infrastructure. The Project responded that it was considering a digital skills competency framework to better define and measure the level of digital skills; and to introduce computer science curriculum from the primary education level instead of starting from secondary level.

256. The Government of South Sudan has recognized the role of digital public platforms in increasing the efficiency and effectiveness of policy design and implementation. It has introduced an e-service platform. However, the platform has suffered from limited interoperability of

backend systems, and the absence of a centralized data management system in the country renders data hosting on the platform difficult.

257. Furthermore, the lack of a consolidated digital government strategy has led to a scattered and siloed understanding of digital development among MDAs. The Project responded with considerations with regard to developing a national vision for digital government; expanding connectivity in government offices; and investments in systems.

258. Other issues discussed included digital financial services. Stakeholders indicated that these are at an early stage in the country in terms of market development, and availability of supporting infrastructures. Progress is limited by the constraints of 'hard' infrastructure. This is accompanied by missing legal and regulatory frameworks, the lack of basic financial markets. Underinvestment and the lack of appropriate financial products. The Project strongly recommended to address the regulatory and infrastructural gaps.

259. Asked about digital businesses, stakeholders indicated that there is limited information on the size and nature of such. Consultations showed, however, that digital businesses have been revealed in the last five years. Given the absence of national statistics it is therefore key to continue stakeholder consultations with development partners, NGOs, government agencies, business associations and NGOs to better understand the landscape. Currently, the digital business support ecosystem comprises mainly incubators, led by the private sector or other donor agencies, with limited government support.

260. Consultations with women's associations and businesses showed that gender disparities are generally staggering in South Sudan – which can be seen in the ICT sector. While there are no gender statistics in the ICT sector, consultations showed the existence of a gender gap. For example, in schools, more boys enroll in ICT courses than girls. Stakeholders expressed that ICT is generally not seen as a women's career option. More girls drop out of ICT programs than boys. Stakeholders also indicated a 'lack of female role model effect in the classroom'. Outside of the classroom, women face barriers in accessing ICT infrastructure such as devices or internet because they have lower purchasing power and mobility.

261. A Project preparation mission for the regional part of the project was held in the region from September 26 – 30, 2022, including a regional level workshop from September 26-27, 2022 in Arusha, Tanzania. Consulted stakeholders included representatives from the Ministry of Trade and Industry in South Sudan; the Ministry of Industrialization, Trade and Enterprise Development in Kenya; the Ministry of ICT and Innovation in Rwanda; the Telecommunications Regulatory and Control Agency in Burundi; the Ministry of East African Community Affairs from Uganda; Ministry of Information, Communications and Information Technology in Tanzania; the East African Community (EAC); and the East Africa Health Research Commission. Key objectives of the mission were to hold a validation workshop at the East African Community (EAC) with technical counterparts from Partner States on a draft regional digital roadmap and proposed priority areas for its implementation; confirm activities to be financed by the project and implemented by the EAC; discuss coordination mechanisms and refine implementation arrangements at the EAC, and kickstart the required fiduciary assessments for the project.

262. During the workshop, the Republic of Burundi welcomed the project initiative and informed that it had adopted a National Strategic Plan for the Development of E-Commerce in line with the EAC E-Commerce Strategy. The Republic of Kenya noted that the project initiative was conceived at an appropriate time following the adoption of the EAC E-Commerce Strategy, which aims at enhancing capacities for growth, improving legal and regulatory frameworks, and increasing trust

in digital trade. It informed that the country had undertaken an E-Readiness study, which has informed the development of a national draft E-Commerce Strategy. It also informed that several other initiatives, such as the Horn of Africa Cable and Eldoret-Nadapal Projects are ongoing. The United Republic of Tanzania stated that the country was in progress of developing an E-Commerce Strategy and National Digital Economy Framework. The Republic of Uganda called on all partner states to ensure that national strategies are aligned with regional ones. The Republic of South Sudan affirmed that the development of a regional framework will guide the partner states in the development of national laws and regulations.

263. Stakeholders further made the observation that regional digital inclusion also empowers youth, persons with disabilities, and women; technology costs on data roaming is currently very high and there is need to reduce costs with a view to establishing seamless connectivity across the region; there is need to develop national strategies that will address the impact of natural disasters and climate change on connectivity infrastructure; and there is need to develop and implement a regional framework for regulatory oversight of postal services and national addressing systems in the region to facilitate e-commerce. Furthermore, interoperability of postal systems, regional control rooms in customs, and e-commerce superhighways of the regions need to be promoted. Capacity development, regional repositories, online training modules and tools, knowledge sharing and skills development are required. In addition, ICT data collection and national statistics need to be enhanced. The Project aims to fill these gaps.

264. In view of e-payments, stakeholders emphasized the need to establish interoperability of the mobile payment system across the region, as well as other payment systems in the world. E-signature recognition in the region should be established to better facilitate e-commerce and intra-regional trade and subsequent participation in the African Continental Free Trade Area. E-signature was pointed out to be important also for improving custom procedures as recognized by the Trade Facilitation Agreement of the WTO. In view of online customary protection, the establishment of in-line consumer protection guidelines under the e-Commerce protocol should be informed and should be brought in line with the OECD guidelines.

265. In regards to data protection, Kenya, Uganda and Rwanda featured strongly with their data protection laws and monitoring institutions. The Project will address data protection by focusing on key priorities: interoperability of laws and regulations of data protection and cross-border data to foster a more integrated regional digital market; development of a framework for data protection in a manner that fosters a data interoperability across the region; a mechanism that facilitates the safe sharing of data; and ensuring data protection to ensure the trust of users.

266. Stakeholders further raised concerns of cyber security. This will be addressed by the Project by enabling cross-border business activity through harmonized cybersecurity legislation, policies and standards. Furthermore, the Project will help to protect East Africa's networks, platforms, applications and services from attacks. It will protect East Africa's GDP from losses through cybercrime. It will create a reliable and trustworthy regional enabling environment for investment and support the sharing of threats and incidents.

267. Consulted stakeholders made the following observations regarding cybersecurity: There is a need for uniform understanding of terms, such as person or non-personal data; challenges occur when criminal activity crosses jurisdictions; cybersecurity should not be achieved at the expense of other rights; there is a skills gap in cybersecurity; it needs to be ensured that he protection of children and persons with disabilities is well incorporated. The Project will aim to address these issues.

268. Project Preparation Mission: During the broader regional Project Preparation Mission to Addis Ababa, August 30 to September 30, 2022 the World Bank team and a team from the Government of South Sudan consulted with a variety of stakeholders, including from the Regional Economic Communities (RECs), Intergovernmental Authority on Development (IGAD) and the East African Community (EAC).

269. In addition to this broader regional mission, a reverse mission for South Sudan was held from September 2-9, 2022. During the reverse mission, consulted stakeholders included representatives of the MICT&PS, Ministry of Finance and Planning (MoFP), National Communications Authority (NCA), National Revenue Authority; Ministry of Higher Education, Science and Technology; and the CEO from the South Sudan International Gateway (SSIGW) (see Annex 12). The mission included cross-country exchanges and dialogues between Ethiopia, Somalia and South Sudan, in which countries committed to regional digital integration. Furthermore, consultations indicated that private sector participation in financing for infrastructure development is critical to fill any financing gaps.

9. GRIEVANCE REDRESS MECHANISMS

270. Under the World Bank ESSs,[43] Bank-supported projects are required to facilitate mechanisms that address concerns and grievances that arise in connection with a project.[44] One of the key objectives of ESS 10 (Stakeholder Engagement and Information Disclosure) is 'to provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow borrowers to respond and manage such grievances'.[45] This Project GRM should facilitate the project to respond to concerns and grievances of the project-affected parties related to the environmental and social performance of the project. The Project will provide mechanisms to receive and facilitate resolutions to such concerns. This section lays out the grievance redressal mechanisms (GRM) for the EA-RDIP.

271. As per World Bank standards, the GRM will be operated in addition to a separate GBV/SEA/SH Action Plan, which includes reporting and referral guidelines. However, the Project GRM will also handle GBV/SEA/SH cases where necessary. Additionally, in line with the provisions of ESS2, a grievance mechanism will be provided to all direct workers and contracted workers to raise workplace concerns. Workers will be informed of this grievance mechanism at the time of recruitment and the measures put in place to protect them against any reprisal for its use. This worker grievance mechanism is included in the project's Labor Management Procedures (LMP) (see ESMF). Given the small-scale nature of works and focus on locally sourced labor, the intake mechanisms of the overall GRM will also allow intake of grievances under ESS2. Note that for SH at the workplace, provisions under the GBV/SEA Action Plan apply.

272. The GRM aims to address concerns effectively and in a timely and transparent manner. It is readily accessible for all project-affected parties and does not prevent access to judicial and administrative remedies. It is designed in a culturally appropriate way and is able to respond to all the needs and concerns of project-affected parties.

GRM Core Principles

273. The GRM is based on six core principles:

Fairness: Grievances are treated confidentially, assessed impartially, and handled transparently.

Objectiveness and independence: The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment in each case. GRM officials have adequate means and powers to investigate grievances (e.g., interview witnesses, access records).

Simplicity and accessibility: Procedures to file grievances and seek action are simple enough that stakeholders can easily understand them. Project stakeholders have a range of contact options including, at a minimum, a telephone number. The GRM is accessible to all stakeholders, irrespective of the remoteness of the area they live in, and their level of education or income. The GRM does not use complex processes that create confusion or anxiety.

[43] World Bank, Environmental and Social Framework, 2018.
[44] Under ESS 2 (Labour and Working Conditions), a grievance mechanism for all direct or contracted workers is prescribed, which is laid out in the Labour Management Plan (LMP). The World Bank's Good Practice Note on 'Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works'[44] spells out requirements for a GBV grievance redress mechanisms, which is laid out in a separate GBV/SEA and Child Protection Risks Action Plan.
[45] World Bank, 2018, p. 131.

Responsiveness and efficiency: The GRM is designed to be responsive to the needs of all complainants. Accordingly, staff handling grievances are trained to take effective action, and respond quickly to grievances and suggestions.

Speed and proportionality: All grievances, simple or complex, are addressed and resolved as quickly as possible. The action taken is swift, decisive, and constructive.

Participation and social inclusion: A wide range of stakeholders are encouraged to bring grievances and comments to the attention of the Project staff. Special attention is given to ensure that marginalized or vulnerable groups, including those with special needs, are able to access the GRM.

GRM STEPS

274. Step 1: Grievance Uptake: Multiple channels must be available for stakeholders to file their complaint, grievance, or feedback. The stakeholder must be able to select the most efficient institution, the most accessible means of filing a grievance, and must be able to circumvent partial stakeholders in the Project, which may be implicated in the complaint. He or she must further be able to bypass some grievance channels that are perceived as potentially not responsive or biased.

Means of Filing a Grievance

275. There are four distinct means, at least two of which must be made available at the sub-project locality for people to file a grievance (see complaints form and grievance register, Annex 4):

7. A phone number for a hotline operator: The phone number of a grievance hotline operator must be widely disseminated among project stakeholders. The Hotline Operator should be available from 8.00 am to 5.00 pm every day. The hotline operator is set up and managed by the PIU. Any concerned party can call the hotline number and file a grievance with the Project.

8. A help desk will be set up during the implementation of sub-project activities in a specific locality, especially where construction activities are undertaken. It should be manned by the implementing staff, in close coordination with local authorities. At the help desk, stakeholders can inquire about information in regard to project activities, or they can file a grievance directly with the person manning the desk.

9. Relevant assigned personnel available in each project site will be required to accept grievances and ensure that avenues for lodging grievances are accessible to the public. The first point of contact for all potential grievances from community members may be the contractor or a local government official. Such personnel will be required to accept formal grievances; or they can point out the Hotline Operator's number, the Help Desk or Suggestion Box. If no reasonable other modality of filing a grievance is available for the respective complainant, the staff has to accept and register the grievance.

10. A suggestion box will be installed at the nearest Boma or Payam office of the sub-project site. Suggestion boxes provide a more anonymous way of filing a grievance or for providing feedback. Grievances or feedback submitted to the suggestion box must be expressed in writing.

Incident reporting

276. Severe incidents (defined as an incident *that caused significant adverse effect on the environment, the affected communities, the public or workers*, for example: Fatality, GBV, forced or child labor) will be reported within 48 hours to the PIU and onwards to the World Bank.

277. At all times, the PIU will provide feedback promptly to the aggrieved party, for example through the phone. Feedback is also communicated through stakeholder meetings and beneficiary meetings during project activities. For sensitive issues, feedback is given to the concerned persons bilaterally.

278. Records of all feedback and grievances reported will be established by the PIU. All feedback is documented and categorized for reporting and/ or follow-up if necessary. For all mechanisms, data will be captured in an excel spreadsheet. The information collected, where possible, should include the name of the person providing feedback as well as the boma, payam and county, (where applicable), the project activity and the nature of feedback or complaint.

279. Step 2: Sort and Process: All registered grievances will be transferred to the PIU GRM Officer – either by the Hotline Operator, local personnel, or the Help Desk Officer. The GRM Officer will categorize the complaint. Worker-related grievances will be handed over to a workers' GRM. Where grievances are of sexual nature, the focal point has to handle the case appropriately, and refer the case to the GBV reporting protocols and referral system, defined in the SEA/SH Action Plan. Dedicated training on how to respond to and manage complaints related to Sea/SH will be required for all GRM operators and relevant project staff.

280. Where grievances can be handled locally, the GRM Officer will return these grievances to the appropriate local structures to be handled by existing dispute settlement mechanisms. However, these can only be involved if the GRM Officer assesses that the complainant is not a member of a vulnerable group or minority that would not be catered for by the local mechanism in an equal manner.

281. For grievances handled under the general Project GRM, the GRM Officer will determine the most competent and effective level for redress and the most effective grievance redress approach. The Officer will further assign timelines for follow-up steps based on the priority of the grievance, and make a judgment and reassign the grievance to the appropriate staff or institution. The person will exclude grievances that are handled elsewhere (e.g. at the court). The GRM Offer should offer the complainant option/s for resolution of their grievance.

282. The GRM Officer will also transfer the grievance information into a more comprehensive grievance register.

283. Step 3: Acknowledgement and Follow-Up: The PIU will decide whether a grievance can be solved locally, with local authorities, contractors, or NGOs, and whether an investigation is required. The first ports of call will have in-depth knowledge of communal socio- political structures and will therefore be able to recommend to the GRM Officer the appropriate individuals that could be addressed with the case, if the case can be solved at the local level. At all times, the GRM Officer will provide feedback promptly to the aggrieved party (unless the case was filed anonymously), within 5 working days after the grievance is filed. Feedback can be provided through the phone, in writing or through the community facilitators. Feedback is also communicated through stakeholder meetings and beneficiary meetings during Project activities. For sensitive issues, feedback is given to the concerned persons bilaterally.

284. Step 4: Verify, Investigate and Act: The GRM Officer will then undertake activity-related steps in a timely manner. The activities will include: verifying, investigating, redress action and plan.

285. Verification: Check for eligibility (objectively based on set standards and criteria) of the complaint in terms of relevance to the project; escalate outright grievances that require high level interventions; refer outright grievances that are outside the project jurisdiction (e.g. refer to PIU Project Coordinator or relevant external institution).

286. Once eligibility is determined, the GRM Officer will categorize the complaint into defined categories:

Investigation:

- GRM Officer to appoint an independent investigator (E&S Specialists, professional outside the Implementing institution) who is a neutral investigator with no stake in the outcome of the investigation
- Collect basic information (reports, interviews with other stakeholders while ensuring triangulation of information, photos, videos)
- Collect and preserve evidence
- Analyze to establish facts and compile a report

Grievance Action Plan

- Based on the findings determine the next steps and make recommendations: (i) direct comprehensive response and details of redress action; (ii) referral to the appropriate institution to handle the grievance, where the IP has no jurisdiction
- undertake mutually agreed follow-actions
- Update of complainant
- Provide complainant with a grievance redress status update and outcome at each stage of redress, (iii) update the IP or PIU on grievance redress across the GRM value chain.

287. Step 5: Monitor, Evaluate and Provide Feedback: The GRM Officer will provide feedback to GRM users and the public at large about: results of investigations; actions taken; why GRM is important; enhance the visibility of the GRM among beneficiaries; and increase in users' trust in the GRM.

288. The PIU will undertake the following monitoring actions: develop indictors for monitoring the steps of GRM value chain; track grievances and assess the extent to which progress is being made to resolve them; conduct a stakeholder satisfaction survey for the GRM services; conduct analysis of the raw data on the following: average time to resolve grievances, percentage of complainants satisfied with action taken, and number of grievances resolved at first point of contact; provide a report on grievance redress actions pertaining to the steps of GRM value chain.

289. The PIU will evaluate the GRM by: analyzing grievance data to reveal trends and patterns; sharing GRM analysis in management meetings; and taking corrective action on project implementation approaches to address the grievance.

WB's Grievance Redress Service (GRS)

290. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are

promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

10. CAPACITY BUILDING AND TRAINING PLAN

291. The aim of capacity building and training for E&S risk mitigation is to ensure that all concerned actors in the project have the requisite capacities to comply with the E&S requirements. The skills areas where capacity building and training are required are tentative and will be updated when the project starts, and an E&S capacity assessment of the various entities involved is conducted.

Areas of Capacity Building and Training

292. Identified training areas include:

Training may be required for PIU staff, and contractors on:

- Stakeholder mapping and engagement
- Specific aspects of environmental and social assessment and screening
- GRM
- Implementation and monitoring of ESMPs
- Resettlement Action Plan implementation
- Emergency preparedness and response
- Community health and safety.
- SEA/SH awareness
- Code of Conduct
- E-waste management

293. Training for Project workers will be required on:

- Occupational health and safety (OHS) including on emergency prevention and preparedness and response arrangements to emergency situations.
- Workers' GRM
- Code of Conduct
- SEA/SH awareness
- LMP

Table 10 Capacity Building and Implementation Plan Activity

Activity	Description	Unit Cost (USD)
Training of the PIU staff on the World Bank Environment and Social Framework	Workshop to be facilitated by the WB E&S team	2,000
Training for PIU staff on stakeholder mapping and engagement; E&S assessment and screening; GRM; Implementation and monitoring of ESIAs/ESMPs; RAP implementation; Emergency preparedness and response; Community health and safety; SEA/SH awareness; Code of Conduct, and E-waste management.	Workshop to be facilitated by the project E&S Experts with support from the WB team	2,000
Training for implementing partners and contractors on stakeholder mapping and engagement; E&S assessment and screening; GRM; Implementation of ESMPs; Emergency preparedness and response; Community health and safety;	Internal training by PIU E&S Experts	10,000

SEA/SH awareness; Code of Conduct, and E-waste management.		
Training of project workers on OHS, GRM, CoCs, Sea/SH awareness, LMP	Internal training by the PIU E&S Experts	7,000
Total budget		**21,000**

11. Budget

Indicative budget for implementing the ESMF

294. This section presents the budget estimates for implementation of the E&S instruments. However, detailed budgets for project specific subprojects will be developed during the preparation of the ESMPs and C-ESMP, for the various sub-project, lots of contracts or contracts. The budget and implementation timing are presented in the Table 7 below.

Table 11 ESMF Implementation Schedule and Budget Estimates

	Required Resources	**USD**
	PIU – Monitoring of E&S	
1.	Human Resources:	
	Social Expert	Incl. in PMU staff costs
	Environmental Expert	Incl. in PMU staff costs
	GBV Specialist	Incl. in PMU staff costs
	Security Specialist	Incl. in PMU staff costs
	Other consultants	Incl. in PMU budget
3.	Logistics / Travel for monitoring and supervision	150,000
	Grievance Redress Mechanism	
4.	Hotline and other mechanisms	300,000
	Implementation of Risk Mitigation Measures	
11.	Implementing partner or contractor E&S staff	Incl. in IP or contractor budget
12.	Preparation of ESIA/ESMP (consultants) – PIU or IP	100,000
13.	Implementation of Risk Mitigation Measures	300,000 (contractor)
14.	SEP implementation	670,000 (PIU)
15.	Trainings and Capacity Building	50,000 (PIU)
16.	SEA/SH Prevention and Response Plan	200,000 (PIU)
	TOTAL	**1,720,000**

12. CONCLUSIONS AND RECOMMENDATIONS

295. This ESMF is comprehensive and attempts to capture potential environmental and social aspects of the South Sudan EA-RDIP. The project has a signigifcant geographical scope and thus capacity building and training activities recommended will be replicated many times and in many places. It is recommended that E&S Experts be recruited early in the project to ensure that an E&S compliance culture is inculcated early for sustainability and to avoid work stoppages along the way.

REFERENCES

BRACED, Building Resilience and Adaptation to Climate Extremes and Disasters, 2016, accessed at: http://www.braced.org

CARE, The girl has no Rights, GBV in South Sudan, 2016

European Union, Seed policy status in South Sudan. European Union, International Cooperation and Development, 2016

FEWS Net, Livelihoods Zone Map Descriptions for the Republic of South Sudan (updated), Washington DC, 2018

G20 Financial Inclusion Indicators from the World Bank Global Partnership for Financial Inclusion at https://datatopics.worldbank.org/g20fidata/

Gafaar, A. (2011). Forest Plantations and Woodlots in Sudan. Nairobi: African Forest Forum.
IUCN. 2016. The IUCN Red List of Threatened Species. Version 2016-1. Available at: www.iucnredlist.org.

GOSS, National Baseline Household Survey (NBHS)

Greenberg, Joseph (ed), Universals of Human Language, Cambridge Mass. MIT Press, 1963

Iffat Idris, Local governance in South Sudan: an overview, K4D Helpdesk Report, November 2017

International Crisis Group, Towards a Viable Future in South Sudan, February 2021, accessed at: https://www.crisisgroup.org/africa/horn-africa/south-sudan/300-toward-viable-future-south-sudan

International Crisis Group, South Sudan's Other War: Resolving the Insurgency in Equatoria, 2021, accessed at: https://www.crisisgroup.org/africa/horn-africa/south-sudan/b169-south-sudans-other-war-resolving-insurgency-equatoria

IPCC, Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. International Panel on Climate Change, 2014

Kenwill International Limited, Gender Assessment Report Summary, Feed Fortifying Equality and Economic Diversification (FEED), Improved Livelihoods in South Sudan. World Vision South Sudan, 2015

Maxwell, Daniel and Kirsten Gelsdorf and Martina Santschi, Livelihoods, basic services and social protection in South Sudan, Feinstein International Center, July 2012

Müller, Angela and Utz Pape and Laura Ralston, Broken Promises. Evaluating and Incomplete Cash Transfer Program, Policy Research Working Paper 9016, The World Bank, Washington DC 2019.

MWRI, Water Policy. Juba: Ministry of Water Resources and Irrigation (MWRI), Government of South Sudan. Retrieved November 14, 2016

NBI, State of the River Nile Basin. Entebbe, Uganda: Nile Basin Initiative (NBI), 2012 http://sob.nilebasin.org/

OCHA, South Sudan, Humanitarian Snapshot, November 2021, accessed at: https://reliefweb.int/sites/reliefweb.int/files/resources/south_sudan_humanitarian_snapshot_november_0.pdf

OHCHR, Report of the Commission on Human Rights in South Sudan, 2019

Office of the Secretary-General's Envoy on Youth, UN Secretary-General's Envoy on youth visits South Sudan, accessed at: https://www.un.org/youthenvoy/2020/02/un-secretary-generals-envoy-on-youth-visits-south-sudan/

Open Global Rights, Illegal logging fuels conflict and violence against women in South Sudan, accessed at: https://www.openglobalrights.org/Illegal-logging-fuels-conflict-and-violence-against-women-in-south-Sudan/

Peace & Freedom, South Sudan, accessed at: https://1325naps.peacewomen.org/index.php/south-sudan/

Pendle, Naomi, Marco Pfister, Martina Satschi, Mareike Schomerus, Danielle Stein, Eddie Thomas, Craig Valters, Local Socio-Political Organization and Implications for Community-Driven Development in South Sudan An Analysis of Existing Literature, prepared for the World Bank, unpublished, 2012

Republic of South Sudan, First National Adaptation Plan for Climate Change, Juba, 2021

Republic of South Sudan, Land Degradation Neutrality Target Setting. Final Report, March 2020

Richardson, T, Pastoral Violence in Jonglei. Washington, DC: Inventory of Conflict and Environment (ICE), Trade Environment Database (TED), American University, 2011

Secure Livelihoods Research Consortium, Livelihoods and conflict in South Sudan, October 2016

The World Bank, South Sudan, accessed at:
https://data.worldbank.org/indicator/SP.POP.DPND?locations=SS

The World Bank, South Sudan. Economic Brief, April 2019

The World Bank, South Sudan, Linking the Agriculture and Food Sector to Job Creation Agenda, Sustainable Development Group World Bank, June 2019

The World Bank, South Sudan, Economic Update, Socio-Economic Impacts of Covid-19, July 2021, accessed at:
https://documents.worldbank.org/en/publication/documents-reports/documentdetail/440961614950205838/south-sudan-economic-update-socioeconomic-impacts-of-covid-19

The World Bank, HNP Knowledge Brief on Strengthening Service Delivery Resilience in FCV Settings. Case: South Sudan, January 2019

The World Bank, South Sudan, Economic Brief, April 2019

The World Bank, South Sudan. Approaches to Targeting in South Sudan, June 2019

The World Bank, Strengthening Gender Outcomes in Social Protection and Poverty Focused Programs in South Sudan, 2019

The World Bank, Environmental and Social Framework, 2018

The World Bank's Good Practice Note on 'Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works

Transparency International, Corruption Perception Index 2021, accessed at: https://www.transparency.org/en/cpi/2021/index/ssd

UNDP Human Development Index https://www.hdr.undp.org/en/countries/profiles/SSD

UNDP, Investing in Agriculture for Food Security and Economic Transformation. United Nations Development Programme South Sudan, 2012

UNDP, Human Development Report 2020, Inequalities in Human Development in the 21st Century.

UNESCO, South Sudan, accessed at: http://uis.unesco.org/en/country/ss

UNHCR, South Sudan, accessed at: https://data2.unhcr.org/en/situations/southsudan

UNICEF, Education in South Sudan, Briefing Note, September 2021, accessed at: https://www.unicef.org/southsudan/media/7946/file/Education%20Briefing%20Note_2021%20Q3.pdf

UNMIS, Escalating Intercommunal Conflict could unravel the Peace Agreement, 9 June 2020, accessed at:
https://unmiss.unmissions.org/escalating-intercommunal-conflict-could-unravel-peace-agreement

UNICEF, South Sudan GBV Briefing Note, 2019

UN Women, South Sudan Country Data, accessed at: https://data.unwomen.org/country/south-sudan

USAID. (2016). Climate Risk Profile. South Sudan. Washington, DC: United States Agency for International Development (USAID). Retrieved December 2019, from https://www.climatelinks.org/resources/climate-change-risk-profile-south-sudan

WHO, WHO Country Cooperation Strategy 2014-2019, 2017, accessed at: https://apps.who.int/iris/bitstream/handle/10665/136881/ccsbrief_ssd_en.pdf;jsessionid=A0FFDD30D766E4F600740FF703903B85?sequence=1

World Health Organization, Situation Report issue #25, 9-15 July 2018, accessed at: https://www.afro.who.int/sites/default/files/2018-07/South%20Sudan%20Situation%20Report%20Issue%20%23%2025_8-15%20July%202018%20.pdf?ua=1

Worldometer Covid-19, South Sudan, accessed at: https://www.worldometers.info/coronavirus/country/south-sudan/

World Vision International, Fortifying Equality and Economic Diversification FEED II, Gender Analysis Report, August 2021, accessed at: https://www.wvi.org/publications/report/south-sudan/feed-ii-gender-analysis-report

World Vision International, Fortifying Equality and Economic Diversification (FEED), 2015, accessed at: https://www.wvi.org/africa/publication/improving-livelihoods-south-sudan-through-fortifying-equality-and-economic

ANNEX 1: SUB-PROJECTS ENVIRONMENTAL AND SOCIAL SCREENING PROCEDURES

Form A. Sub Projects Screening Procedures

Section A: General Criteria

1. Name of subproject:

_____

2. State:

_____

3. County:

_____

4. Contractor information:

_____

5. Name:

_____

6. Address and email:

_____

7. Information of the responsible for the screening process and filling the form

_____

8. Name:

_____

9. Profession:

_____

10. Phone number

_____

11. Email:

_____

12. Date:

_____

13. Signature:

_____

Section B. Environmental and Social Description and preliminary assessment of situation and those potential environmental and social impacts
Description of sub-project site location: include coordinates and maps

_____
_____
_____

Description of the natural surroundings and settings (i.e. topographical features, habitats, flora and vegetation, fauna)

_____
_____
_____

Description of the social surroundings and settings, (i.e. urban/rural, violence, approx. population density, approx. Income level

_____
_____
_____

Are there any new projects in the vicinity of the subproject that could contribute to cumulative impacts?

1. Pollution and Contamination Risks

Description	Yes	No	Not known
Is there a possibility of pollution or contamination risks by discharges from latrines, and dump sites, etc.?			

2. Geology

Description	Yes	No	Not Known
Is there a possibility of soil instability and erosion?			
Is there a possibility of saltwater intrusion?			
Is there a possibility of flooding or interrupting natural drainages and or surface runoff?			

3. Soil Erosion

Description	Yes	No	Not Known
Could the subproject activities affect soil erosion processes			
Could the subproject activities create indirect activities that could promote soil erosion processes?			
Will the subproject modify slopes?			
Could the sub-project activities create processes that could modify slopes?			
In the event the sub-project activities promote or create activities that could lead to install infrastructures or activities in areas with slopes. In those unstable slopes is there a probability for danger?			
Would there be a need for consultation of a geology expert?			

4. Water: Quality and Quantity

Description	Yes	No	Not Known

Is there any Surface waters or runoff evidence nearby the sub-project implementation site?			
Will the sub-project increase the use and demand of freshwater resources?			
Will the sub-project generate or discharge waste liquid substances into natural surface waters, swamps or palustrine habitats			
Would the sub-project produce negative impacts on the nearby surface waters?			
Would there be a need for consultation of a water expert?			

5. Groundwaters: Quality and Quantity

Description	Yes	No	Not known
Is there an exploitable groundwater resource by the sub-project?			
Will the sub-project increase groundwater uses?			
Will the sub-project discharge waste waters or any other liquid wastes unto the ground waters and aquifer?			
Could the sub-project deteriorate or alter the groundwaters?			
Would there be a need for consultation of a hydrological expert?			

6. Energy Source

Description	Yes	No	Not Known
Will the sub-project increase the demand for energy consumption?			
Will the sub-project create a demand for a different source of energy?			
Will the subproject create a demand for different type of energy sources? if yes define type:			

7. Uses of Natural Resources

Description	Yes	No	Not Known
Would the subproject require and use considerable quantities of natural resources? (i.e. construction materials, water, soils, sand, gravels)			

8. Biodiversity

Description	Yes	No	Not known
Will the activity encroach in any sensitive habitat?			
Will the sub-project potentially have an adverse impact on biodiversity?			
Is the subproject area (or components of it) located within/adjacent to any protected areas designated by government (national park, national reserve, world heritage site etc…)?			
Are there wetlands (swamp, seasonally inundated areas) that could be affected?			
Are there any critical, natural habitats, environmentally sensitive areas or threatened species that could be significantly converted/adversely affected due to the works?			

9. Maintenance and Upgrades

Description	Yes	No	Not known

Will the subproject need frequent maintenance and upgrades during its operation?			

10. Labor

Description	Yes	No	Not known
Will the subproject increase employment in the zone?			
Will the subproject eliminate job opportunities in the zone?			
Will the subproject increase income and means of sustenance? ----------			
Will the subproject diminish income and means of sustenance?			
Does the subproject include the recourse to wommunity workers?			
Will the works require a workers' camp? If 'yes', how many workers are expected to occupy the camp?			
Are the infrastructure wrks prone to natural hazards, risks and could result in accidents and injuries to workers during construction or operation?			
Does the subproject require the use of pest management technique that could affect the agriculture and / or public health?			

11. Population: Risks and Impacts

Description	Yes	No	Not known
Would the adverse and negative risks and impacts will be evenly distributed amongst the area of influence of the project			

12. Indigenous Peoples/Local Traditional Communities and Sub-Saharan

Description	Yes	No	Not known
Is the subproject located or any of its activities are in land, or spaces where is a presence of communities as described in the ESS-7 of the WBG?			

13. Cultural Heritage

Description	Yes	No	Not known
Will the subproject activities could affect or be constructed in or within a patrimonial heritage site?			
Will the subproject have adverse impact on any tangible or intangible cultural heritage?			

14. Land acquisition

Description	Yes	No	Not known
Is there a need for an involuntary land acquisition, home resettlement, loss of income or access that could be related to a reduced quality of life to peoples nearby or in the project influenced areas?			
Will th subproject require voluntary land donation? If yes, can all ESS5 principles on this matter be respected and documented?			

Did resettlement occur prior to land acquisition? If so, is there any pending land dispute?			
Are there any significant legacy issues?			

15. Stakeholder Consultations

Description	Yes	No	Not known
Has input from community members and those who may be affected by the works been sought?			
Has the subproject received overall stakeholder support oncuding from vulnerable individuals and marginalized groups?			
Is there any opposition to the subproject?			

Part C: Conclusion/ Next actions

Recommended Actions:

- High Risk or Substantial Risk: These are sub-projects that may contain substantial to high environmental and social risk impacts. These subprojects would require a full ESIA and/or a detailed ESMP. They may also require a RAP linked to the resettlement impact anticipated.
- Moderate Risk: covers subprojects that have medium environmental and social risks and impacts, including ones that are site-specific, temporal and reversible in nature. In addition to the environmental and social clauses in the contract, most if not all of these subprojects should require an environmental assessment that will collate findings into a detailed ESMP. Contractors will also be required to prepare C-ESMPs.
- Low Risk: covers subprojects that do not have a physical footprint. These subprojects will not require environmental safeguard instrument preparation; environmental and social Clauses in the contract will be recommended.

Any other recommendation (please explain)

This form has been completed by: name: _____ title: _____ date: _____ signed: _____	Approved by the subproject manager name: _____ title: _____ date: _____ signed: _____

Project Exclusion List / Activites that cannot be financed

- Site-specific subprojects/project activities that require the application of Free Prior Informed Consent (FPIC)
- Site-specific subprojects/project activities that can have significant adverse impacts on critical biodiversity, ecologically sensitive areas and natural habitas

- Site-specific subprojects/project activities that have potential substantial adverse impacts on tangible of intangible cultural heritage
- Site-specific subprojects/project activities with the wrong size and design
- Site-specific subprojects/project activities not reviewed by experienced and qualified engineers
- Activities that may have significant adverse social impacts and may give rise to significant social conflict between communities
- Activities that involve harmful or exploitative forms of forced labour / harmful child labour;
- Activities that involve significant air emissions, harmful effluents, noise emissions above international standards, or represent potential physical, chemical, biological, and radiological hazards, or any threat to community health and safety that cannot be mitigated by the environmental and social instruments proposed in this ESMF;
- Activities that in areas identified as at risk from flooding, rising water levels, landslides, ravines, fires, etc.

ANNEX 2: Indicative Outlines for ESMP and ESIA

Table 12 Indicative Outline/Content for ESMP

Section	Content of Section
Executive summary	Concisely discusses significant findings and recommended actions, in English and in the respective local language.
Project description	Concisely describe the proposed subproject and its geographic, ecological, social, and temporal context. Clearly define and designate the project area of influence (direct and indirect) that is covered by the ESMP. Include a map showing the project site and the project's area of influence
Mitigation	Identify measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. Include compensatory measures, if applicable. Specifically, the ESMP: (i) identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement); (ii) describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; estimates any potential environmental and social impacts of these measures; and (iv) takes into account, and is consistent with, other mitigation plans required for he project (e.g., for involuntary resettlement)
Monitoring	Identify monitoring objectives and specify the type of monitoring, withl inkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Provide (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.
Capacity Development and Training	Draw on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level. Provide a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). Strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

Implementation Schedule and Cost Estimate	For all three aspects (mitigation, monitoring, and capacity development), provide (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.
Integration of ESMP with Project	Specify clearly each of the measures and actions to be implemented, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

Table 13 Indicative Outline for ESIA

Section	Content of Section
Executive summary	Concisely discusses significant findings and recommended actions, in English and in the respective local language.
Project description	Concisely describe the proposed subproject and its geographic, ecological, social, and temporal context, including any offsite investments that may be required. Clearly define and designate the project area of influence (direct and indirect) that is covered by the ESIA. Include a map showing the subproject site and the project's area of influence
Policy, legal, and administrative framework	Discuss the policy, legal, and administrative framework within which the ESIA is carried out. Explain the WB ESS and relevant guidelines. Identify relevant international environmental agreements to which the South Sudan is a party.
Baseline data	Assess the dimensions of the study area and describe relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences. The baseline data must include the results of a Social Assessment. Consider current and proposed development activities within the subproject area, but not directly connected to the project. Data should be relevant to decisions about project location, design, operation, or mitigation measures. The section indicates the accuracy, reliability, and sources of the data.
Environmental and social impacts	Predict and assess the subproject's likely positive and negative impacts, in quantitative terms to the extent possible. Include impacts at various phases of the project, including cumulative impacts. Identify mitigation measures and any residual negative impacts that cannot be mitigated. Explore opportunities for environmental enhancement. Identify and estimate the extent and quality of available data, key data gaps, and uncertainties associated with predictions, and specify topics that do not require further attention.
Analysis of alternatives	Systematically compare feasible alternatives to the proposed project site, technology, design, and operation-including the "without project" situation-in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. State the basis for selecting the particular project design proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.
Environmental and social management plan (ESMP).	Cover hierarchy of measures (avoidance, prevention, mitigation, compensation/offset) and include both generic construction measures and site-specific measures to address impacts on

	sensitive receptors. The mitigation measures identified in a Social Assessment will be incorporated in the ESMP. Include all other sub-plans that are sub-sets of the ESMP
Environmental monitoring and reporting plan	List institutional arrangements, capacity assessment and capacity building program

ANNEX 3: SAMPLE TOR FOR ESIA PREPARATION

These Terms of Reference (TOR) are applicable to development projects involving Digitization acceleration projects. The ToRs outline the aspects of an Environmental and Social Impact Assessment (ESIA) which when thoroughly addressed will provide a comprehensive evaluation of the sites, in terms of predicted environmental impacts, needed mitigation strategies, potentially viable alternatives to the development proposed and all related legislation.

Planned Areas: Issues such as slope stability, impact on drainage patterns, property etc. should be examined. The path of the corridor cleared of vegetation for transmission lines, substations and Hydro power plants should be the major focus of this exercise.

Rivers/ Riverine Areas: Issues such as erosion and siltation, macro invertebrate habitat destruction, disrupting of regular flow of the river and the possible impact of upstream activities on the area ecosystems e.g., wetlands etc.

Distinct Terrestrial Forest Types: Issues relating to the specific growth form of the vegetation, the carrying capacity, the successional stage of the forest and the projected level of disturbance which the forest can withstand.

Sites located within and adjacent to areas listed as protected or having protected species:

The main issue(s) of concern will be in part determined by the local legislation as well as Government of South Sudan (GoSS) responsibilities under applicable international conventions. The impact of the development on the specific sensitivities of the protected area should be highlighted. Mitigation of impacts should assess if the post mitigation status would be acceptable in the protected area context. Alternative sites should be rigorously evaluated. Socio–Economic issues such as land acquisition and impact of these conveyances on commerce in the community should be closely examined.

The Environmental and Social Impact Assessment should:

Provide a complete description of the corridor proposed for development. This should include a description of the main elements of the development, highlighting areas to be reserved for construction, the creation of verges and other green areas.

- Identify the major environmental and social issues of concern through the presentation of baseline data which should include social and cultural considerations. Assess public perception of the proposed development.
- Outline the Legislation and Regulations relevant to the project.
- Predict the likely impacts of the development on the described environment, including direct, indirect and cumulative impacts, and indicate their relative importance to the design of the development's facilities.
- Identify mitigation action to be taken to minimize adverse impacts and quantify associated costs.
- Design a Monitoring Plan which should ensure that the mitigation plan is adhered to.
- Describe the alternatives to the project that could be considered at that site.

To ensure that a thorough Environmental and Social Impact Assessment is carried out, it is expected that the following tasks be undertaken:

a) Executive summary

- Concisely discusses significant findings and recommended actions.

b) Legal and institutional framework

- Analyses the legal and institutional framework for the project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 264.
- Compare the Borrower's existing environmental and social framework and the ESSs and identify the gaps between them.
- Identifies and assesses the environmental and social requirements of any co-financiers.
- Outline the pertinent regulations and standards governing environmental quality, safety and health, protection of sensitive areas, protection of endangered species, siting and land use control at the national and local levels. The examination of the legislation should include at minimum, legislation such as the land law, Environmental protection and conservation law, expropriation law, the Public Health Act, the urban Planning Act, Building Codes and Standards, Development Orders and Plans and the appropriate international convention/protocol/treaty where applicable.

c) Description of the subproject

- Concisely describes the proposed subproject and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS 1 through 10.
- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

d) Baseline data

This task involves the generation of baseline data which is used to describe the study area as follows:

- Physical environment
- Biological environment
- Socio-economic and cultural constraints.
- It is expected that methodologies employed to obtain baseline and other data be clearly detailed.
- Baseline data should include:

(i) Physical

- A detailed description of the existing geology and hydrology. Special emphasis should be placed on storm water run-off, and drainage patterns. Any slope stability issues that could arise should be thoroughly explored.
- Water quality of any existing rivers, ponds, streams, or coastal waters in the vicinity of the corridor or substation. Quality Indicators should include but not necessarily be limited to suspended solids, turbidity, oil, and grease.
- Climatic conditions and air quality in the area of influence including particulate matter wind speed and direction, precipitation, relative humidity and ambient temperatures,
- Obvious sources of pollution existing and extent of contamination.

(ii) Biological

- Present a detailed description of the flora and fauna (aquatic and terrestrial) in the proposed corridor of influence, with special emphasis on rare, endemic, protected or endangered species. Migratory species should also be considered. There may be the need to incorporate microorganisms to obtain an accurate baseline assessment. Generally, species dependence, niche specificity, community structure and diversity ought to be considered.

(iii) Socio-economic & Cultural

- Present and projected population; present and proposed land use; planned development activities, issues relating to squatting and relocation, community structure, employment, distribution of income, goods and services; recreation; public health and safety;
- Cultural peculiarities, aspirations and attitudes should be explored. The historical importance of the area should also be examined. While this analysis is being conducted, it is expected that an assessment of public perception of the proposed development be conducted. This assessment may vary with community structure and may take multiple forms such as public meetings or questionnaires.

e) Identification of Potential Environmental and Social Impacts

Takes into account all relevant environmental and social risks and impacts of the project. This will include the environmental and social risks and impacts specifically identified in ESS2 – 8, and any other environmental and social risks and impacts arising because of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.

Identify potential impacts as they relate to, (but are not restricted by) the following:

- public health and safety, risk assessment, change in drainage pattern flooding potential and aesthetics;
- landscape impacts of excavation and construction
- loss of natural features, habitats and species by construction and operation
- noise, air pollution, pollution of potable, coastal, surface and groundwater - Socio-economic and cultural impacts.
- Loss of land and assets due new transmission lines construction and operation
- Distinguish between significant positive and negative impacts, direct and indirect, long term and immediate impacts.
- Identify trigger, avoidable reversible and irreversible impacts.

f) *Mitigation Measures*

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assesses the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.
- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.

g) Project Alternatives Analysis

• Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including the "without project" situation—in terms of their potential environmental and social impacts.
• Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the alternative mitigation measures.
• For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

h) *Design Measures*

- Sets out the basis for selecting the particular project design proposed and specifies the applicable EHSGs or if the ESHGs are determined to be inapplicable, justifies recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.

i) Environmental and Social Management Plan

- Covers mitigation measures, budget requirements and funding sources for implementation, as well as institutional strengthening and capacity buildings requirements.

j) An Environmental and Social Monitoring Plan

An outline monitoring program should be included in the ESIA, and a detailed version submitted to RDB's e-portal system for review and approval prior to the commencement of the development. At the minimum, the monitoring program and report should include:

- The activity being monitored, and the parameters chosen to effectively carry out the exercise.
- The methodology to be employed and the frequency of monitoring.
- The sites and project components being monitored. These may in instances, be predetermined by the RISA and should incorporate a control site where no impact from the development is expected.

k) Stakeholder Engagement

- List and details of engagements undertaken in the preparation of the ESIA
- List and plan for further engagements to be undertaken during implementation

l) GRM

- detail GRM mechanisms to be applied

m) Information Disclosure

- list how and when thie ESIA is disclosed

n) Appendices

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—setting out the written materials both published and unpublished, that have been used.
- Record of meetings, consultations, and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
- Tables presenting the relevant data referred to or summarized in the main text.
- List of associated reports or plans.
- Terms of reference.

ANNEX 4: SAMPLE GRIEVANCE LOG FORM

Reference No: _____

Details of Complainant:

Note: you can remain anonymous if you prefer or request not to disclose your identity to the third parties without your consent

Full name: _____

❑ I wish to raise my grievance anonymously

❑ I request not to disclose my identity without my consent

Contact

_____

❑ **By Mail:** Please provide mailing address:

_____

Gender of Complainant:

Age of Complainant:

Contact Information Please tick how you wish to be contacted: - ❑ E-mail, ❑ Telephone, ❑ in Person

❑ By Telephone: _____

❑ By E-mail _____

❑ One time incident/grievance Date ____/_____/

❑ Happened more than once (how many times) _____

❑ On-going (currently experiencing problem)

Description of Incident or Grievance:

Location of grievance:

What happened? Where did it happen? Who did it happen to? What is the result of the problem?	_____ _____ _____ _____ _____ _____

_____

What would you like to see happen to resolve the problem?

_____
_____
_____

The grievance register will contain the following information (ideally in an excel file, or if at local level in a book) :

Table 14 Grievance Register

Type of Information	Response
Complaint/ Log number	
Reference document (s)	
Date complaint made	
Date complaint received	
Category of Grievance	
Method of Logging: Direct Communication; Suggestion Box; Toll-free Line;	
Complaint name (state if anonymous)	
Location in which complained action took place (district, village)	
Caller contacts for follow up	
Gender	
Age	
Parties against whom complaint is made (unit/contractor/agency etc)	
Nature of Complaint ["SEA/GBV"; "Timing of Payment"; "Amount of Payment"; "Inclusion or Issue regarding Project benefits" or create standard categories based on complaint type]	
Description of Complaint	
Nature of feedback (describe)[In case issue type is GBV/SEA immediate referral to the GBV referral system]	
Verification and investigation (describe)	
Recommended action (describe)	

Timeline of Initial feedback (within 5 days) [investigate the claim within 5 working days, and share findings/feedback with relevant stakeholder]	
Status update (and justification if it is not expected to be resolved within the timeframe set out)	
Date resolved	
Indicate if a spot check has been conducted (you can include then in the narrative reports spot checks for resolutions of x number of complaints have been conducted)	

Table 15 GBV/SEA Case Registration Form

GBV/SEA/SH Case Registration Form		
Administrative Information		
	Grievance ID	
	Code of Survivor (Employ a coding system to ensure that client names are not easily connected with case information)	
	Date of grievance registration	
	Date of Incident	
	Reported by survivor or an escort of the survivor, in the presence of the survivor	
	Reported by someone other than the survivor without survivor present	
Survivor Information		
	Gender / age	
	Location / Residence	
	Current civil/marital status	
	Occupation	
	Is the survivor a person with mental or physical disabilities?	
	Is the survivor an unaccompanied or separated child?	
	Was the perpetrator related to the project?	
	Has Informed Consent been provided? yes/no?	
	Has the case been reported elsewhere (including police / lawyer/health services/psychosocial counseling, other)?	
Sub-Section for Child Survivor		
	If the survivor is a child (less than 18 years), does he or she live alone?	
	If the survivor lives with someone, what is the relation between her/him and the caretaker? (parent/guardian; elative; spouse; other)	
	What is the caretaker's current marital status?	
Details of the Incident (in survivor's words)		
	Details of the incident	
	Incident location and time	
	Were money, goods, benefits and/or services exchanged in relation to the incident?	
Alleged Perpetrator Information		
	Number of alleged perpetrators	
	Sex of alleged perpetrators	
	Age group of alleged perpetrator(s)	
	Indicate relationship between perpetrator(s) and survivor	
	Main occupation of the alleged perpetrator(s)	

	Employer of the alleged perpetrator(s)	
Planned Actions / Actions Taken		
	Was the survivor referred by anyone?	
	Was the survivor referred to a safe house / shelter?	
	Which services does the survivor wish to be referred to? - Psychosocial services - Legal services - Police - Health services - Livelihood program	
	What actions were taken to ensure the survivor's safety?	
	Describe the emotional state of the client at the beginning of the report	
	Other relevant information	

ANNEX 5: ELECTRONIC WASTE (E-WASTE) MANAGEMENT PLAN FOR THE EARDIP – SOUTH SUDAN

OVERVIEW

The South Sudan, EA-RDIP will support the Government of the Republic of South Sudan (GoRSS) to establish digital connectivity and integrate with the regional digital market. The project has four components as briefly described below:

- Component 1. Connectivity Market Development and Integration. This component will provide support to develop terrestrial cross-border connectivity and expand the backbone and last mile connectivity to rural and remote communities.
- Component 2. Data Market Development and Integration. This component will provide support to the integration and development of data market, to enable secure exchange, storage and processing of data across borders to support regional deployment and access to data-driven services and innovation
- Component 3. Online Market Development and Integration. It will provide support to the integration and development of the online market, through targeted support for e-services.
- Component 4. Project Management. It will provide Technical assistance and capacity support for project preparation and implementation for the key implementing agency i.e., the Ministry of Information, Communications, Technology and Postal Services (MICT&PS) within GoSS.

The project's environmental and social risk rating is substantial considering the potential environmental, social, health and safety risks and impacts which could result from the implementation of activities under Components 1, 2, and 3. The potential EHS risks and impacts include alteration of terrestrial and aquatic habitats (due to broadband connectivity infrastructure deployment); construction and electronic wastes; localized greenhouse gas emissions; and occupational health and safety issues. A range of social risks may occur including i) physical and/ or economic displacement because of land take for fixed line components, access road and other fixed infrastructure under Component 1 and data centers under Component 2. (ii) adverse impacts to land used by traditional local communities depending on siting of infrastructure. Differential impacts may be experienced by vulnerable groups.

INTRODUCTION

The Ministry of Information, Communications, Technology and Postal Services (MICT&PS) within the Government of the Republic of South Sudan (GoSS) commits to manage environmental and social risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project and to the potential risks and impacts. The generation of waste is one of those risks that must be considered during the preplanning and implementation phases of the project. Waste management planning for the project should be conducted early as possible to identify sound management practices and procedures within legal and environmental frameworks. Possible waste streams that may be generated during project implementation may include solid wastes, hazardous wastes, and electronic wastes, etc. However, the focus of this plan is on electronic wastes or E-wastes. An E-Waste Management Plan (EWMP) is used to describe the waste management related issues within the Electrical and Electronic Equipment (EEE) industry sector and specify the best way to address these issues, giving specific actions, targets, and timeframes. This E-waste management plan should be implemented throughout the project's lifecycle to protect the environment, biodiversity, and habitats, safeguard the health of the local communities, and comply with the World Bank Environment, Safety and Health Guidelines (ESHG), Environmental and Social Standards (ESS), South Sudan legislations and regulations, and Good International Industry Practice (GIIP).

CONSIDERATIONS ON E-WASTE MANAGEMENT

An E-Waste Management Plan (EWMP) is used to describe the waste management related issues within the Electrical and Electronic Equipment (EEE) industry sector and specify the best way to address these issues, giving specific actions, targets and timeframes. The aspects related to the generation and management of all types of waste must be considered from the very beginning, during the predesign, contracting, construction, and operational phases. In all cases, provisions shall be taken to minimize waste production and to provide proper management to reduce the impacts that these may have on the environment.

The EWMP based on ESS1 and ESS3, shall establish responsibilities in relation to the risks and impacts throughout all project phases, and it shall be implemented consistently with the requirements spelled out in the ESMF to avoid affectation to stakeholders and livelihood, biodiversity and habitats nearby and surroundings of the project sites and activities.

E-waste definition and general considerations

E-waste is a term used to cover items of all types of electrical and electronic equipment (EEE) and its parts that have been discarded by the owner as waste without the intention of reuse. Although e-waste is a general term, it is considered to cover TVs, computers, mobile phones, white goods (fridges, washing machines, dryers, etc.), home entertainment and stereo systems, toys, toasters, kettles – almost any household or home business item with circuitry or electrical components with power or battery supply. E-waste contains materials that, if mishandled, can be hazardous to human health and the environment, but, most importantly, also materials that are valuable and scarce.

E-waste volumes are growing exponentially simply because of the market demand. The proper treatment of e-waste avoids negative impacts and yields many benefits. E-waste, if not properly treated, can have negative impacts, both on human health and on the environment. However, sustainable treatment of e-waste avoids these negative impacts.

The appropriate handling of e-waste can both prevent serious health and environmental damage and also recover valuable materials, especially for common metals and precious metals. The recycling chain for e-waste is classified into three main subsequent steps: i) collection; ii) sorting/dismantling and pre-processing (including sorting, dismantling and mechanical treatment); and, iii) end processing. All three steps should operate and interact in a holistic manner to achieve the overall recycling objectives.

The main objectives of sustainable e-waste recycling are: i) Treat the hazardous fractions in an environmentally sound manner; ii) Maximize the recovery of valuable materials; iii) Create eco-efficient and sustainable business; and iv) Consider social impact and local context.

Electronic products to be procured under the project

Electronic products to be procured under the project include laptops, printers, photocopy machines and other electronic accessories, as well as all materials for the fibre optic cables. The exact quantity/number of the electronic equipment to be procured is not known at this stage.

Toxicity and radioactive nature of E-waste to human, water, soil, and animals

Electrical and electronic equipment contain different hazardous materials, which are harmful to human health and the environment if not disposed of carefully. While some naturally occurring substances are harmless in nature, their use in the manufacture of electronic equipment often results in compounds, which are hazardous (e.g., chromium becomes chromium VI). Lead, mercury, cadmium, and polybrominated flame retardants are found in electronic equipment and are all

persistent, bio-accumulative toxins (PBTs). They can create environmental and health risks when computers are manufactured, incinerated, landfilled, or melted during recycling. PBTs, in particular, are a dangerous class of chemicals that have longevity in the environment and bioaccumulate in living tissues. PBTs are harmful to human health and the environment and have been associated with cancer, nerve damage and reproductive disorders. Table 1 depicts a selection of the most common toxic substances in E-waste**.**

Table 16 Toxic Substances in E-waste

Substance	**Occurrence in E-waste**
Halogenated compounds	
PCB (polychlorinated biphenyls)	Condensers, Transformers
TBBA (tetrabromo-bisphenol-A) PBB (polybrominated biphenyls) PBDE (polybrominated diphenyl ethers)	Fire retardants for plastics (thermoplastic components, cable insulation) TBBA is presently the most widely used flame retardant in printed circuit boards
Chlorofluorocarbon (CFC)	Cooling unit, Insulation foam
PVC (polyvinyl chloride)	Cable insulation
Heavy metals and other metals:	
Arsenic	Small quantities in the form of gallium arsenide within light emitting diodes
Barium	Getters in cathode ray tubes (CRTs)
Beryllium	Power supply boxes which contain silicon-controlled rectifiers and x-ray lenses
Cadmium	Rechargeable computer batteries, fluorescent layer (CRT screens), printer inks and toners, photocopying-machines (printer drums)
Chromium VI	Data tapes, floppy-disks
Lead	CRT screens, batteries, printed wiring boards, television sets, PC monitors, light bulbs, lamps
Lithium	Li-batteries
Mercury	Fluorescent lamps that provide backlighting in LCDs, in some alkaline batteries and mercury wetted switches
Nickel	Rechargeable NiCd-batteries or NiMH-batteries, electron gun in CRT
Rare Earth elements (Yttrium, Europium)	Fluorescent layer (CRT-screen)
Selenium	Older photocopying-machines (photo drums)
Zinc sulphide	Interior of CRT screens, mixed with rare earth metals

Arsenic
Arsenic is a poisonous semi-metallic element, which is present in dust and soluble substances. Chronic exposure to arsenic can lead to various diseases of the skin and decrease nerve conduction velocity. Chronic exposure to arsenic can also cause lung cancer and can often be fatal.

Barium
Barium is a metallic element that is used in sparkplugs, fluorescent lamps and "getters" in vacuum tubes. Being highly unstable in the pure form, it forms poisonous oxides when in contact with air. Short-term exposure to barium could lead to brain swelling, muscle weakness, damage to the heart, low blood potassium, cardiac arrhythmias, respiratory failure, gastrointestinal dysfunction, paralysis, muscle twitching, and elevated blood pressure, liver, and spleen. Animal studies reveal increased blood pressure and changes in the heart from ingesting barium over a long period of time.

Beryllium
Beryllium has recently been classified as a human carcinogen because exposure to it can cause lung cancer. The primary health concern is inhalation of beryllium dust, fume, or mist. Workers who are constantly exposed to beryllium, even in small amounts, and who become sensitized to it can develop what is known as Chronic Beryllium Disease (beryllicosis), a disease that primarily affects the lungs. Beryllium can also affect organs such as the liver, kidneys, heart, nervous system, and the lymphatic system, may develop beryllium sensitization or chronic beryllium disease. Exposure to beryllium also causes a form of skin disease that is characterized by poor wound healing and wart-like bumps. Studies have shown that people can still develop beryllium diseases even many years following the last exposure.

Brominated flame retardants (BFRs)
The 3 main types of BFRS used in electronic and electrical appliances are Polybrominated biphenyl (PBB), Polybrominated diphenyl ether (PBDE), and Tetrabromobisphenol - A (TBBPA). Flame-retardants make materials, especially plastics and textiles, more flame resistant. They have been found in indoor dust and air through migration and evaporation from plastics. Combustion of halogenated case material and printed wiring boards at lower temperatures releases toxic emissions including dioxins, which can lead to severe hormonal disorders. Major electronics manufacturers have begun to phase out brominated flame-retardants because of their toxicity.

Cadmium
Cadmium components may have serious impacts on the kidneys. Cadmium is adsorbed through respiration but is also taken up with food. Due to the long half-life in the body, cadmium can easily be accumulated in amounts that cause symptoms of poisoning. Cadmium shows a danger of cumulative effects in the environment due to its acute and chronic toxicity. Acute exposure to cadmium fumes causes flu-like symptoms of weakness, fever, headache, chills, sweating and muscular pain. The primary health risks of long-term exposure are lung cancer and kidney damage. Cadmium also is believed to cause pulmonary emphysema, possibly reproductive damage, and bone disease (osteomalacia and osteoporosis).

CFCs (Chlorofluorocarbons)
Chlorofluorocarbons are compounds composed of carbon, fluorine, chlorine, and sometimes hydrogen. Used mainly in cooling units and insulation foam, they have been phased out because when released into the atmosphere, they accumulate in the stratosphere and have a deleterious effect on the ozone layer. This results in increased incidence of skin cancer in humans and in genetic damage in many organisms.

Chromium
Chromium and its oxides are widely used because of their high conductivity and anti-corrosive properties. While some forms of chromium are nontoxic, Chromium (VI) is easily absorbed in the human body and can produce various toxic effects within cells. Most chromium (VI) compounds are irritating to eyes, skin, and mucous membranes. Chronic exposure to chromium (VI) compounds can cause permanent eye injury, unless properly treated, human carcinogens, impacts on neonates, reproductive and endocrine functions. Chromium VI may also cause DNA damage.

Dioxins
Dioxins and furans are a family of chemicals comprising 75 different types of dioxin compounds and 135 related compounds known as furans. Dioxins is taken to mean the family of compounds comprising polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). Dioxins have never been intentionally manufactured but form as unwanted by-products in the

manufacture of substances like some pesticides as well as during combustion. Dioxins are known to be highly toxic to animals and humans because they bio-accumulate in the body and can lead to malformations of the foetus, decreased reproduction and growth rates and cause impairment of the immune system among other things. The best-known and most toxic dioxin is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).

Lead

Lead is the fifth most widely used metal after iron, aluminium, copper, and zinc. It is commonly used in the electrical and electronics industry in solder, lead-acid batteries, electronic components, cable sheathing, in the glass of CRTs etc. Short-term exposure to high levels of lead can cause vomiting, diarrhoea, convulsions, coma or even death. Other symptoms are appetite loss, abdominal pain, constipation, fatigue, sleeplessness, irritability, and headache. Continued excessive exposure, as in an industrial setting, can affect the kidneys. It is particularly dangerous for young children because it can damage nervous connections and cause blood and brain disorders.

Mercury

Mercury is one of the most toxic yet widely used metals in the production of electrical and electronic applications. It is a toxic heavy metal that bio-accumulates causing brain and liver damage if ingested or inhaled. In electronics and electrical appliances, mercury is highly concentrated in batteries, some switches and thermostats, and fluorescent lamps.

Polychlorinated biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) are a class of organic compounds use in a variety of applications, including dielectric fluids for capacitors and transformers, heat transfer fluids and as additives in adhesives and plastics. PCBs have been shown to cause cancer in animals. PCBs have also been shown to cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, endocrine system, and other health effects. PCBs are persistent contaminants in the environment. Due to the high lipid solubility and slow metabolism rate of these chemicals, PCBs accumulate in the fat-rich tissues of almost all organisms (bioaccumulation). Nonetheless, PCBs may not be relevant for this project.

Polyvinyl chloride (PVC)

Polyvinyl chloride (PVC) is the most widely used plastic, used in everyday electronics and appliances, household items, pipes, upholstery etc. PVC is hazardous because it contains up to 56 percent chlorine which when burned produces large quantities of hydrogen chloride gas, which combines with water to form hydrochloric acid and is dangerous because when inhaled, leads to respiratory problems.

Selenium

Exposure to high concentrations of selenium compounds cause selenosis. The major signs of selenosis are hair loss; nail brittleness, and neurological abnormalities (such as numbness and other odd sensations in the extremities).

Toxic substances likely to be present in the electronic products supported by the project

Considering electronic products to be supported by the project include laptops, printers, photocopy machines and other electronic accessories. Hence, common toxic substances likely to be associated with such electronic products might include PBDE (polybrominated diphenyl ethers), TBBPA (tetrabromo-bisphenol-A), cadmium, chromium, beryllium, lead, lithium, nickel, mercury, selenium, zinc, yttrium, brominated flame retardants, halogenated flame retardants, tin, polyvinyl chloride (PVC) and phthalates, etc.

Benefits from Sustainable E-Waste Management Practices

Sustainable management practices, i.e., recycling operations, also considerably contribute to reducing greenhouse gas emissions. Primary production of metals that are part of the E-waste usually is large contributors to greenhouse gas emissions, i.e., mining, concentrating, smelting and refining, especially of precious and special metals have a significant carbon dioxide (CO2) impact due to the low concentration of these metals in the ores and often difficult mining conditions. But "mining" of old phones, servers, or old computers to recover the contained metals – if done in an environmentally sound or correct manner – needs only a fraction of energy compared to mining ores in nature. Recycling of E-Waste equipment reduces the amount of land that has to be set aside specifically as landfill zones which in turn can be used for far more productive and socially beneficial usages such as low-income housing, more farming, or renewable energy power supplies. Recycling means that less money and energy has to be expended for the mining of the various minerals, which are consumed during the manufacturing process for the production of E-Waste equipment.

The environmental footprint of a phone, a computer, and other electronic devices could be significantly reduced if treated in environmentally sound managed recycling operations, which prevent hazardous emissions and ensure that a large part of the contained metals is finally recovered for a new life. This E-Waste Management plan does not include or mandates for the establishment of an E-Waste recycling infrastructure, but points in the direction that; building a sustainable recycling infrastructure creates jobs and contributes to capacity building. The sustainable collection, sorting, manual dismantling, and pre-processing of e-waste could create a significant number of jobs in the countries that would develop this activity.

E-WASTE MANAGEMENT PLAN (EWMP)

E-Waste Management During the Implementation Phase

This Electrical Waste Management Plan (EWMP) will be implemented throughout the project's lifecycle and will follow and comply with the ESS1 and ESS3 of the Environmental and Social Framework of the World Bank. The plan is required to be adopted during the project implementation period when project-financed electrical equipment (computers, printers, servers, cables, etc.), and backup generators, among others, are replaced, irreparable or at their end of life. This plan must also comply with existing South Sudanese legislation and regulations, WB ESHG, and Good International Industrial Practice (GIIP).

Material Recycling Process

The material recycling processes of waste computers can be split into three steps: 1) dismantling or disassembling process, 2) pre-processing (mechanical process), and 3) recovery and refining process. Although this plan illustrates the resourceful recycling process of waste computers, the methodology of recycling for other electronic equipment of information and communication technology is almost similar.

Dismantling Process

Dismantling is the systematic removal of components, parts, a group of parts or a sub-assembly from waste electronic equipment. The dismantling process is performed with simple tools such as screwdrivers, air drivers, hammers, tongs, and conveyors to separate the materials and components into different categories (i.e., plastics, iron, steel, copper, printed circuit boards, etc.). Disassembling of waste computers makes the recycling process easy and efficient. Disassembling process breakdowns the computers into small components and materials, which makes the packing, shipping, pre-processing and refining process easy and efficient. Although the manual disassembling process is

not economically feasible in developed countries because of the unavailability of workers and high wages, it is still viable in developing countries and many parts of the world.

Computer Case

Generally, the computer cases are disassembled manually to separate the main body (iron, aluminium, or plastic), power supplies, copper wires, cooling fans, CD drives, floppy disk drives, hard drives, memory modules, PCI cards, motherboards (PCBs), CPUs, etc.

Cathode Ray Tube (CRT) Monitors

The CRT unit is mainly composed of different kinds of glass: panel glass, made of strontium/barium oxides in front of the monitor; funnel glass, leaded glass that covers the CRT unit; neck glass, highly leaded glass that covers the electron gun; and front glass, highly leaded glass that results from welding the funnel glass to the panel glass. Aside from the glass, the CRT unit contains a ferrous shadow mask and an electron gun. Waste CRT monitors cause a substantial portion of the regional and global electronic waste stream. CRT monitors possess nominal or negative scrap value as they contain leaded glass; therefore, CRT monitors are difficult and expensive to recycle. As a result, CRT monitors are usually transferred to be dismantled manually and discarded in safety regions of environmental protection.

Liquid Crystal Display (LCD) Monitors

Disassembled components of LCD monitors of waste computers are classified in printed circuit boards (PCBs), cold cathode fluorescent (CCFL) tubes, LCD panel glasses, metals, speakers, plastics, and others. The plastics and metals can be recycled by existing technology, transferring them to a plastic recovery facility. CCFL tubes usually contain small amounts of mercury, requiring special treatment. Therefore, CCFL tubes must be disassembled from the LCD module. This type of tube should be transferred to heavy metal (i.e., mercury) recovery facility after disassembling, which yields no scrap value. The LCD panel glasses consist of a number of layers, which typically consist of 25 or more components. These include glass, foil, and liquid crystal compounds. The LCD panel glasses denote an environmental risk, and it is necessary to be disassembled them from waste LCD monitors.

Polychlorinated Biphenyl (PCBs)

PCB is an essential constituent of all electronic and electrical equipment that contains various metals such as copper (Cu), iron (Fe), lead (Pb), zinc (Zn), gold (Au), silver (Ag), palladium (Pd), platinum (Pt). The substrate of the PCBs is a thermoplastic material and epoxy resin with contents of flame retardants, which are not so easy to recycle. Most of the disassembled PCBs, excluding power boards, contain gold coatings, gold plated connectors, pins, small, medium, and large size IC chips, capacitors, slots, resistance, solder, Integrated Graphics Processor (IGP), Ball Grid Array (BGA) IC chips, and metal films. Typically, six types of PCBs can be categorized after dismantling waste computers and monitors. Type 1 is a PCB of HDD drive, Type 2 is a memory module, Type 3 is a PCI card, Type 4 is a PCB of an LCD monitor, Type 5 is the motherboard, and Type 6 is a lower grade PCB or power board. The value of each scrap PCB is different and depends on the size and number of IC chips, small capacitors, gold pins, gold plated connectors, and area of gold plates.

Identification of Scrap Metals

Different types of scrap metal are extracted from waste computers, such as copper, aluminium, copper, magnesium, zinc, etc. Since the market value of these scrap metals is different, they should be separated at the time of the dismantling process. The scrap metals mined from waste computers can be separated into two categories by magnet test: ferrous and non-ferrous metals. Non-ferrous metals are typically more valuable than ferrous metals. Once the magnet test is finished, additional scratch tests could be executed to distinguish the non-ferrous metal (i.e., aluminium, copper, stainless steel, etc.).

Pre-processing

Pre-processing or mechanical processing is an integrated part of e-waste recycling by shredding into small pieces using crushers and grinders. However, the incineration and pyrolysis process of e-wastes are also considered mechanical processing. Metals and non-metals are separated during this stage using separation techniques such as screening, magnetic, eddy current and density separation techniques. Although this mechanical process makes the e-waste recycling faster and reduces workers' demand, the unselective blending of plastic materials and different types of metal may reduce the recovery rate of metals, especially precious metals and rare metals. Various pre-processing techniques include shredding and separation processes, thermal treatment, pyrolysis, incineration, pulverizing, compressing, etc.

Although pre-processing is essential for disassembled scrap materials from waste computers, all the processes (i.e., shredding, incineration, pulverizing, compressing, etc.) are not obligatory for each and every type of scrap material. Actual process selection of a pre-processing technique usually depends on material characteristics, scrap value, transportation, recovery, and refinery facilities. It is still a big challenge to select actual pre-processing for each and every material to enhance the value of e-waste scraps.

Recovery and Refining Process

Selection of further recovery and refinery process of disassembled scraps is also a big task in the recycling business. Each type of scrap should be sent to a specialized recovery facility to yield maximum recovery efficiency. The final destination (recovery facility) should be selected on the basis of the metal composition of the scraps. The concentration of precious metals and base metals should be measured for each type of PCB. The higher-grade PCBs (containing a comparatively higher amount of precious metals) should be shipped to a recovery facility which specializes in the hydrometallurgical recovery of precious metals. Meanwhile, the lower-grade PCBs (containing a very lower amount of precious metals) should be transferred to a pyrometallurgical recovery facility.

Objectives of the EWMP

The aim should be to achieve and maintain an integrated e-waste management plan that is effective and efficient to ensure the generated e-waste is not indiscriminately disposed to the detriment of human health and the environment. In general terms, this EWMP will be:

(i) to assess the activities involved for the proposed project and determine the type, nature, and estimated volumes of waste to be generated;
(ii) to identify any potential environmental impacts from the generation of waste at the project sites;
(iii) to recommend appropriate waste handling, storage, transport, treatment, and disposal measures in accordance with the current legislative requirements, WB ESHG, and GIIP;

- (iv) to strengthen capacity building and raise awareness to communities and firms on e-waste management risks and impacts.

Legal framework

The legal framework will legally support the bases of the EWMP in each one of the project implementation locations, and this will be based in the local legislature, regulations, resolutions, norms, international treaties, and other legally binding instruments that apply to the project nature.

The Transitional Constitution of the Republic of South Sudan, 2011 includes numerous provisions relating to the biophysical and social environment. Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment and (2) that every person shall be obliged to protect the environment and (3) that future generations shall have the right to inherit an

environment protected for the benefit of present and future generations. E-waste is one of the most indelible sources of pollution of the environment that should be mitigated.

The Wildlife Conservation and National Parks Act at Section 5 of the Act recognizes that wildlife constitutes an important national natural wealth and is part of the heritage of South Sudan and therefore needs to be conserved, protected and utilized for the benefit and enjoyment of all its people. This should be protected from e-waste.

The Public Health (Water and Sanitation) Act (2008) emphasizes the prevention of pollution of air and water and also encourages improvement in sanitation. Key provisions include the protection of the sanitation of the environment and encompasses measures to address the pollution of water and air.

Institutional Framework

This includes the institutions involved in the project administration, management, and operations. These will be identified, and their roles and responsibilities will be defined during the project phases (pre-construction, construction, operation, and closure). During the entire project cycle, the PIU will in line with ESS 4 (on Community Health and Safety), implement measures and actions to control the safety of deliveries of hazardous materials, and of storage, transportation and disposal of hazardous materials and wastes, and will implement measures to avoid or control com- munity exposure to such hazardous material including e-waste. ESS 1 on Assessment and Management of Environmental and Social Risks and Impacts clarifies the responsibilities of the borrower for wastes such as e-waste generated from projects (if not properly sorted, treated and managed) and the hazards thereto. This ESS illustrates the various ES instruments that will be prepared to address the issues of ES risks and impacts. With regard to ESS3 Resource Efficiency and Pollution Prevention and Management, the project is likely to generate a significant amount of e-waste. These may affect the local communities and the environment. In line with the guidance of this ESS this EWMP has been prepared.

Environmental Social Standards (ESS)

Transboundary Environmental Assessment Guidelines for shared ecosystems in East Africa require the project to prepare the project brief which must provide the possible products and by-products, including wastes generated by the project (2.1 (b) (vi)). The Guidelines also require a project to indicate waste and effluent production (if any) during operation of the project and how these will be managed (2.2.2 (a) (v). The project will follow these Guidelines and national legislation, WB ESS, WB ESHG, and GIIP for the management of e-waste. The project will avoid the disposal of E-waste by reuse, recycle, and recover. Where e-waste cannot be reused, recycled, or recovered then the project will treat, destroy, or dispose of e-waste in accordance with ESS 1 and ESS 3, and the guidelines prescribed by the National or Local Authorities. That is, when hazardous waste management is conducted by third parties, the project will use NEMC license hazardous waste contractors and all E-waste will be disposed of in hazardous waste landfill or licensed disposal facilities in accordance with the Environmental Management Regulations.

WB ESHG

The WBG EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP) and are referred to in the World Bank's Environmental and Social Framework and in IFC's Performance Standards. The EHS Guidelines contain the performance levels and measures that are normally acceptable to the World Bank Group, and that are generally considered to be achievable in new facilities at reasonable costs by existing

technology. The World Bank Group requires borrowers/clients to apply the relevant levels or measures of the EHS Guidelines. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects will be required to achieve whichever is more stringent.

The WBG EHS guidelines defines hazardous waste as one sharing the properties of hazardous materials (e.g., ignitability, corrosivity, reactivity or toxicity, etc.,) among other physical, chemical, or biological characteristics that may pose potential health risks. Hazardous waste in terms of this document are ones that are also classified as "hazardous' by local regulations. The EHS guidelines define the practices required from facilities that generate and store waste which include avoidance and minimization, and where waste generation cannot be avoided but has been minimized, recovering, reusing waste and where this cannot be implemented, reusing, treating, and destroying and disposing of it in an environmentally sound manner. Understanding potential impacts and risks associated with the management of any generated hazardous wastes during its complete lifecycle. There is also provision in the EHS guideline that, ensuring the contractors handling treating and disposing hazardous waste should be reputable and legitimate enterprises licensed by relevant regulatory authority and following good international industry practice for the management of hazardous waste. In addition to general waste management measures on waste prevention, reuse, recycling, treatment, disposal, storage, transportation, and monitoring. The contractor should also handle the hazardous management in compliance with applicable local and international regulation. The WB EHS guidelines also requires monitoring records for hazardous waste collected, stored, or shipped. (See annex A on the WBG EHS guidelines on waste management).

GIIP

GIIP promotes the use of an obligation on distributors to offer to consumers a take-back system where e-waste items can be disposed of free of charge. There are two types of take-back systems, and distributors of EEE items must offer one of these schemes to their customers. Examples include free in-store take-back scheme where distributors accept e-waste items from customers purchasing equivalent new items. Distributors take-back scheme where consumers can dispose of WEEE items free of charge at designated collection facilities. E-waste generators should manage and dispose of e-waste responsibly in ways already mentioned in the preceding paragraphs. In addition, when purchasing a new electrical item arrange with the retailer to collect the old one. Businesses and other users (i.e. schools, hospitals, and government agencies) of electrical and electronic goods (EEE) must ensure that all separately collected e-waste is treated and recycled.

<u>Diagnostics and Characteristics</u>

Feasibility analyses must be performed in order to determine the level of involvement and processes needed to implement the EWMP and to what extent. For example, if the generation of e-waste is identified to be very small, maybe the most feasible option will be to store it in an appropriate environmental site until there is a larger volume of E-waste to be properly processed following the guidelines of the EWMP. If the amount of e-waste is large, then it will be feasible to proceed with the later phases of the business of recycling. In all cases this analysis will include an environmental screening assessment to understand the potential negative impacts of the EWMP implementation, in this process the following must be evaluated: i) Possible environmental and social impacts; ii) Evaluation of the environmental and social impacts; iii) Measurements for E-waste management during construction and operational phase of the project; iv) Arrangements for permits for final disposal of the different types of waste that the plan entitles; and, v) Implementation time table or chronogram.

Potential Environmental, social, and health impacts that could arise from the generation of E-waste

Social Impacts: Extraction of copper and gold from e-waste can be extremely harmful if not done properly – the works are often performed by women and children.

Health impacts: According to the WHO, E-waste-connected health risks may result from direct contact with harmful materials such as lead, cadmium, chromium, brominated flame retardants or polychlorinated biphenyls (PCBs), from inhalation of toxic fumes, as well as from accumulation of chemicals in soil, water and food.

Toxins from E-Waste can end up in our food. Hazardous substances from e-waste stay absorbed in the ground for a long time. Farming on land contaminated with toxins from e-waste can create unsafe conditions for food. If e-waste ends up in the ocean and leaches chemicals into shellfish, molluscs, fish, or other marine animals, those toxins can also be passed on to humans. Chemicals that are embedded in seafood will remain once they are caught and cooked and will eventually end up in our bodies.

E-Waste can pollute drinking water if improperly disposed. When disposed of improperly, toxins from e-waste mixes with ponds, lakes, and groundwater. Communities that directly depend on these sources of water then consume it unknowingly. These heavy metals are hazardous for all forms of living beings.

- Lead may cause neurotoxicity, high blood pressure, and muscle pains, and learning disabilities among children. Barium oxide can cause severe skin irritation and ingestion is harmful, and chronic exposure may lead to damage of Central Nervous System (CNS), spleen, liver, kidney or bone marrow.
- Gold is extracted from E-waste either by burning the gold containing components at high temperatures, or using leaching chemicals like cyanide solution. Burning releases toxic gases and disposal of cyanide solution or other leaching chemicals into the drain or on land pollutes water and soil.
- Mostly the above mentioned hazardous chemicals and toxic metals are persistent toxic substances (PTSs), which are released in the environment and can enter the food webs. Several PTSs are known to be endocrine disrupters, posing adverse health effects such as reproductive disorders, developmental deformities, and cancer in both humans and wildlife.
- Dioxins, released from burning of E-waste are known carcinogens, which accumulate in the human body and may cause changes in the immune system, glucose metabolism and reproductive problems.
- Inhalation of cadmium fumes or particles can be life threatening. Cadmium exposure may cause kidney damage. The International Agency for Research on Cancer (IARC) has classified cadmium as a human carcinogen (group I) on the basis of sufficient evidence in both humans and experimental animals.
- Acute mercury exposure may give rise to lung damage. Chronic poisoning is characterized by neurological and psychological symptoms, such as tremor, changes in personality, restlessness, anxiety, sleep disturbance and depression.
- High mercury exposure results in permanent nervous system and kidney damage. It has also been possible to detect proteinuria at relatively low levels of occupational exposure. Metallic mercury is an allergen, which may cause contact eczema.
- The symptoms of acute lead poisoning are headache, irritability, abdominal pain and various symptoms related to the nervous system. People who have been exposed to lead for a long time may suffer from memory deterioration, prolonged reaction time and reduced ability to

understand. Acute exposure to lead is known to cause proximal renal tubular damage. Long-term lead exposure may also give rise to kidney damage.

- Inorganic arsenic is acutely toxic and intake of large quantities leads to gastro intestinal symptoms, severe disturbances of the cardiovascular and central nervous systems, and eventually death. Populations exposed to arsenic via drinking water show excess risk of mortality from lung, bladder and kidney cancer, the risk increasing with increasing exposure. There is also an increased risk of skin cancer. Studies on various populations exposed to arsenic by inhalation, such as smelter workers, pesticide manufacturers and miners in many different countries consistently demonstrate an excess lung cancer.
- Beryllium can cause sensitization, lung and skin disease in a significant percentage of exposed workers. Calcium chromate, chromium trioxide, lead chromate, strontium chromate, and zinc chromate are known human carcinogens. An increase in the incidence of lung cancer has been observed among workers in industries that produce chromate and manufacture pigments containing chromate.
- Exposure to relatively high concentrations of antimony (9 mg/m3 of air) for a longer period of time can cause irritation of the eyes, skin and lungs. As the exposure continues more serious health effects may occur, such as lung diseases, heart problems, diarrhea, severe vomiting and stomach ulcers.

Environmental impacts: The impact of the e-waste on the environment includes the following:

- Air Pollution: Burning of wires (to extract the copper underneath the rubber insulation) releases hydrocarbons into the atmosphere.
- Water Pollution: When disposed of improperly, toxins from e-waste seeps with ponds, lakes, and groundwater.
- Soil Pollution: The waste-products of recycling (along with leftover e-waste) is dumped into fields or other large landfill sites. From here, chemicals leach into the ground and are absorbed by plants from the soil. These metals not only destroy the plants, but also are then consumed by other living beings, leading to a poisonous food chain.

The risk on marine life from e-waste is well pronounced. Some electronics end up being dumped into waterways, whether accidentally or on purpose. Once there, electronic components start to break down and the toxins inside the devices can seep out into the environment. These polluting chemicals or heavy metals, like lead, travel through water and contaminate or poison marine life.

When electronics are not properly recycled, much of the precious metals and resources that were used to produce the device are lost to landfills. This creates further demand for newly mined materials. Thus, mining for metals used to produce new phones is causing habitat loss. Mining operations often clear-cut forests and use explosives to blast into the ground. Mining can also leak toxic by-products into nearby rivers and nearby soil. This disturbs the natural ecosystem and leads to habitat loss for the species living in the area. Overall, habitat destruction results in the mass migration or starvation of animal species living in the area and is the number one cause of extinction of animal species worldwide. For example, the habitat destruction stemming from the aggressive mining of cobalt is driving gorillas to extinction in the Congo. (Cobalt is a metal used in mobile phones and other electronics).

E-Waste Mitigation Measures and Management Plan

This E-Waste Management Plan contains proposed mitigation measures through which all e-waste can be managed in accordance with the national legislation, WB ESF, WB ESHG, and GIIP. The

mitigation measures or guidelines have been designed in order to avoid, minimize, and reduce negative environmental and social impacts at the project level. The mitigation measures are presented in Table 3 in a descriptive format.

Procurement of electronic items of a high quality and from reputable retailers/sources

The first mitigation measure is to ensure that all electronic devices are procured from retailers and sources that are credible, that all devices will have a clear date of manufacture and warranty and the item is of a high quality. This will avoid procurement of poor quality, refurbished, or used second hand electronic devices with a shorter life cycle that leads to a rapid generation of E-waste. All items should be purchased where applicable, with protective covers and insurance. If possible, retailers or source of electronic items should be engaged where a repair, renewal, recycling or take back scheme option is offered. If the retailer or source does not offer some or all of these options, then the project is to locate legally licensed facilities that do repair or recycle electronic items. If such options do not exist, then disposal in licensed disposal facilities for hazardous wastes should follow the Environmental Management Regulations as prescribed by the National or Local Authorities.

Awareness and Sensitization

Awareness and sensitization of project staff and contractors (as applicable) who will use or install the electronic devices on the proper disposal once they become damaged, irreparable or at their end of life is vital. The project office should include in the sensitization the usefulness and significance of E-waste recycling, and the need for returning back all electronic items procured by the project to a collection centre that should be established. Also, project staff should be aware and sensitize on the fact that cell phones and computers do hold sensitive data/information, which present security risks if not properly disposed, and this can lead to lawsuits.

Budget and Costs

In each phase of the project there must be a budget with associated costs of the development and implementation of EWMP. The budget must consider all management activities, as well as potential procurement of equipment, including personal protective equipment and collection, sorting, dismantling, temporary storage, transportation, and disposal of the e-waste as well as audit and training/capacity building of project staff and contractors. The budget will also include contingency expenditures. These budgets to be prepared in charts showing cost estimations categorized for each management activity presented must also include those contingency expenditures and expending charted chronograms. The budget by the PIU will be itemized and should include all financial considerations that are being adopted for the general implementation of all project activities.

Public Consultation Mechanism

The information provided to the project participants and workers, as well as to the communities and all other relevant stakeholders, must be early and culturally appropriate. Procedures must be established for solicitation, convening, and training to workers and affected communities. Amongst the potential topics to cover are labor ethics, responsibilities, and rights, sustainable daily issues and behavior, care for nature and biodiversity, environmental management. For information mechanisms to communities and workers the following must be considered: written information (press), radio, internet, social media, workshops, etc. The public consultation of project activities must be performed before project implementation, at the design level during the pre-construction phase. This activity is a requirement under ESS10 and demands the local stakeholder's active participation which shall be continuous throughout all the project phases. The result of the public consultations shall be included in the EWMP for all project activities.

Grievance Redress Mechanism (GRM)

The procedures for the GRM are based on the ESS10. This process will follow the format described in this ESMF. In general terms, the GRM will include actions such as registry and chart log of visits, complaints, observations, and comments of all interested parties.

Monitoring, Review and Reporting

The implementation of the EWMP will be managed by the MoICT&PS and PIU according to the implementation section of this ESMF. Monitoring, review and reporting activities must be performed throughout all phases of the project. It will be important to have control of all activities implemented as part of the Plan, by measuring their efficiency, effectiveness, and compliance. This will assist in preparing the evaluation to address improvement actions if so needed. This mechanism will include project supervision and reporting (daily logs, verification and technical, environmental and engineering reports (weekly, monthly, quarterly) as agreed. Some key information that must also be collected include data on i) Number of producers (importers) registered; ii) Percentage of registered producers / all producers; iii) Details of official e-waste collection points and recyclers participating; iv) Amount of waste collected and treated, quarterly reporting of output by material state (reuse, recycle), type (product, metal, plastic, other) and destination (smelter, incinerator, producer, landfill).

Adaptive Management Arrangements

These are defined as alternative managerial actions, different from what was originally planned. These managerial arrangements must be adopted due to unforeseen events during project implementation, which in turn generate a need for an adaptive management approach to address the new and unexpected situations. The EWMP shall be updated in the case an adaptive management arrangement is decided to be needed. All specific details and considerations shall be properly recorded in the Plan.

E-WASTE ENVIRONMENTAL HEALTH AND SAFETY GUIDELINES

Recommended Procedures for E-wastes Management Plan (EWMP)

General E-Waste Management

The following guidance applies to the management of non-hazardous and hazardous e-waste. Additional guidance specifically applicable to hazardous e-wastes is presented below. E-waste management should be addressed through an e-waste management system that addresses issues linked to e-waste, which include generation, waste management (reduction, reuse, recycling), transportation, disposal, and monitoring.

As part of the E-waste Management Plan, e-waste should be characterized according to composition, sources, types of e-waste, generation rates, and local legislation. Effective planning and implementation of e-waste management strategies should include: i) Revision of new e-waste sources during all project phases including planning, siting, and equipment upgrades, in order to identify e-waste generation, pollution prevention opportunities, and necessary treatment, storage, and disposal infrastructure; ii) Collection of data and information about the process and e-waste streams in existing facilities, including characterization of e-waste streams by type, quantity, and potential use/disposition; iii) Establishment of priorities based on a risk analysis that takes into account the potential Environmental Health and Safety (EHS) risks during the e-waste cycle and the availability of the infrastructure to manage the e-waste in an environmentally sound manner; iii) Definition of opportunities for source reduction, as well as for reuse and recycling; iv) Definition of procedures and operational controls for onsite storage; and, v) Definition of options/procedures/ operational controls for treatment and final disposal.

E-Waste Prevention Processes

This should be designed and operated to prevent, reduce or minimize, the quantity of e-waste generated and hazards associated with the e-waste generated in accordance with the following strategy: i) Substituting raw materials or parts with less hazardous or toxic materials, or with those where processing generates a lower e-waste volume; ii) Adopting and implementing good housekeeping and operating practices, including inventory control to reduce the amount of e-waste resulting from materials that are out-of-date, off-specification, contaminated, damaged, or are an excess to operational needs; and, iii) Reducing/minimizing hazardous e-waste generation by implementing stringent e-waste segregation to prevent the commingling of non-hazardous and hazardous e-waste from be managed.

Recycling and Reuse

In addition to the implementation of e-waste prevention strategies, the total amount of e-waste may be significantly reduced through the implementation of reuse and recycling plans, which should consider the following elements: i) Identification and reuse/recycling of products that can be reintroduced into the operational processes ii) Investigation of external markets for recycling by other industrial processing operations located in the neighbourhood or region of the facility (e.g., e-waste exchange); iii) Establishing reuse/recycling objectives and formal tracking of e-waste generation and recycling rates; and, iv) Providing training and incentives to employees in order to meet objectives.

Treatment and Disposal

If e-waste materials are still generated after the implementation of feasible e-waste prevention, reduction, reuse, recovery, and recycling measures; then, e-waste materials should be treated and disposed of following all measures to avoid potential impacts to human health and the environment. Selected management approaches should be consistent with the specifications of e-waste characteristics and local regulations, and may include one or more of the following: i) On-site or off-site chemical, or physical treatment of the e-waste material to render it non-hazardous prior to final disposal; ii) Treatment or disposal at permitted facilities specially designed to receive the e-waste; iii) Permitted and operated landfills or incinerators designed for the respective type of e-waste or other methods known to be effective in the safe, final disposal of e-waste materials.

Hazardous E-Waste Management

Hazardous e-waste refers to electric and electronic devices that contain toxic materials such as mercury, lead, arsenic, cadmium, or brominated flame retardants, etc., beyond threshold quantitiesor known to harm human health and the environment.

Hazardous e-waste should always be segregated from non-hazardous e-wastes. If the generation of hazardous e-waste cannot be prevented through the implementation of the above general e-waste management practices, its management should focus on the prevention of harm to health, safety, and the environment, according to the following additional principles: i) Understanding potential risks and impacts associated with the management of any generated hazardous e-waste during its complete life cycle; ii) Ensuring that contractors handling, treating, and disposing of hazardous e-waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the e-waste being handled; iii) Ensuring compliance with applicable local and international regulations, WB ESHG, and GIIP.

An average person involved in e-waste management can recognize hazardous e-waste by looking for warning labels or markings on the device, such as a “crossed-out trash can symbol” or the word "danger." These labels are often found on electronic devices that contain hazardous materials, such as lead, mercury, or other toxic chemicals. In addition, hazardous e-waste may also be identified by the presence of certain materials or substances, such as batteries, toner or ink cartridges, and old

television sets and computer monitors. These items may contain hazardous materials that can be harmful to human health and the environment if they are not handled and disposed of properly.

If a person is unsure whether a particular electronic device is hazardous e-waste, it can check the manufacturer's website or contact them directly to find out more about the materials used in the device and how to properly dispose of it. It can also consult your local waste management agency or environmental agency for guidance on e-waste disposal.

E-Waste Prevention Processes

This should be designed and operated to prevent, reduce, or minimize, the quantity of e-waste generated and hazards associated with the e-waste generated in accordance with the following strategy: i) Substituting raw materials or parts with less hazardous or toxic materials, or with those where processing generates a lower e-waste volume; ii) Adopting and implementing good housekeeping and operating practices, including inventory control to reduce the amount of e-waste resulting from materials that are out-of-date, off-specification, contaminated, damaged, or are an excess to operational needs; and iii) Reducing/minimizing hazardous e-waste generation by implementing stringent e-waste segregation to prevent the commingling of non-hazardous and hazardous e-waste from been managed.

Recycling and Reuse

In addition to the implementation of e-waste prevention strategies, the total amount of e-waste may be significantly reduced through the implementation of reuse and recycling plans, which should consider the following elements: i) Identification and reuse/recycling of products that can be reintroduced into the operational processes ii) Investigation of external markets for recycling by other industrial processing operations located in the neighborhood or region of the facility (e.g., e-waste exchange); iii) Establishing reuse/recycling objectives and formal tracking of e-waste generation and recycling rates; and iv) Providing training and incentives to employees in order to meet objectives.

Hazardous E-Waste Storage

Hazardous e-waste should be properly stored to prevent or control accidental releases to air, soil, and water resources in areas where: i) E-waste is stored in a manner that prevents the commingling or contact between incompatible e-waste and allows for inspection between containers to monitor leaks or spills. Examples include sufficient space between incompatible or physical separation such as walls or containment curbs; ii) Store in closed containers (some could be radioactive proofed), away from direct sunlight, wind and rain; iii) Secondary containment systems should be constructed with materials appropriate for the e-waste being contained and adequate to prevent loss to the environment; iv) Provision of readily available information on compatibility to employees, including labelling each container to identify its contents; v) Limiting access to hazardous e-waste storage areas to only employees who have received proper training; vi) Clearly identifying (labelling) and demarcating the area, including documentation of its location on a facility map or site plan; and, vii) Conducting periodic inspections of e-waste storage areas and documenting the findings.

Transportation of E-Waste

All e-waste containers designated for off-site shipment should be secured and labeled with the contents and associated hazards. This must be properly loaded and secured into transportation vehicles before leaving the site and must be accompanied by a shipping paper (i.e., manifest, record, etc.) that describes the load and its associated hazards, and which is consistent with the Transport of Hazardous Materials good practices and guidance.

When preparing for shipment the following should be implemented:

- Name and identification number of the material(s) composing the e-waste
- Physical state (i.e., solid, liquid, gaseous or a combination of one, or more, of these)
- Quantity (e.g., kilograms or liters, number of containers)
- Waste shipment tracking documentation to include, quantity and type, date dispatched, date transported, and date received, record of the originator, the receiver, and the transporter
- Method and date of storing, repacking, treating, or disposing at the facility, cross-referenced to specific manifest document numbers applicable to the e-waste.
- Location of each e-waste within the facility, and the quantity at each location.

Treatment and Disposal

If e-waste materials are still generated after the implementation of feasible e-waste prevention, reduction, reuse, recovery, and recycling measures; then, e-waste materials should be treated and disposed of following all measures to avoid potential impacts to human health and the environment. Selected management approaches should be consistent with the specifications of e-waste characteristics and local regulations, and may include one or more of the following: i) On-site or off-site chemical, or physical treatment of the e-waste material to render it non-hazardous prior to final disposal; ii) Treatment or disposal at permitted facilities specially designed to receive the e-waste; iii) Permitted and operated landfills or disposal facilities designed for the respective type of e-waste or other methods known to be effective in the safe, final disposal of e-waste materials.

Small Quantities of Hazardous E-waste

Hazardous e-waste materials are frequently generated in small quantities by many projects through a variety of activities such as equipment and building maintenance activities. Examples of these types of e-wastes include used batteries (such as nickel-cadmium or lead-acid); and lighting equipment, such as lamps or lamp ballasts, servers, computers, cables, etc. These types of e-waste should be managed, following the guidance provided in the above sections.

Special considerations for Monitoring Activities

Monitoring activities associated with the management of hazardous and non-hazardous e-waste should include: i) Regular visual inspection of all e-waste storage collection and storage areas for evidence of accidental releases and to verify that e-waste is properly labelled, and stored; ii) Inspection of loss or identification of cracks, corrosion, or damage to protective equipment, or floors; iii) Verification of locks, and other safety devices for easy operation (lubricating if required and employing the practice of keeping locks and safety equipment in standby position when the area is not occupied); iv) Checking the operability of emergency systems; v) Documenting results of testing for integrity, emissions, or monitoring stations; vi) Documenting any changes to the storage facility, and any significant changes in the quantity of materials in storage, vii) Regular audits of e-waste segregation and collection practices, viii) Tracking of e-waste generation trends by type and amount of e-waste generated, preferably by facility departments, ix) Characterizing e-waste at the beginning of generation of a new e-waste stream, and periodically documenting the characteristics and proper management of the e-waste, especially hazardous e-wastes; x) Keeping manifests or other records that document the amount of e-waste generated and its destination; xi) Periodic auditing of third party treatment, and disposal services including re-use and recycling facilities when significant quantities of hazardous e-wastes are managed by third parties. Whenever possible, audits should include site visits to the treatment storage and disposal location. In the event that e-waste (on-site storage and/or pre-treatment and disposal) is in direct contact with soil, additional procedures must be performed to ensure regular monitoring of soil quality.

Monitoring records for hazardous e-waste collected, stored, or shipped should include: i) Name and identification number of the material(s) composing the hazardous e-waste or Physical state; ii) Quantity (i.e., kilograms, number of containers); ii) E-waste shipment tracking documentation to include, quantity and type, date dispatched, date transported and date received, a record of the originator, the receiver and the transporter; iii) Method and date of storing, repacking, treating, or disposing at the facility, cross-referenced to specific manifest document numbers applicable to the hazardous e-waste o Location of each hazardous e-waste within the facility, and the quantity at each location.

The Ministry of Information, Communications, Technology and Postal Services (MICT&PS) within GoRSS will monitor the implementation of this E-Waste management Plan in accordance with national law and E&S instruments agreed to. In the course of monitoring project implementation through Bank Missions the World Bank will also directly monitor the implementation of this EWMP and provide support in enhancing effective implementation Monitoring by the MICT&PS and the World Bank will be preceded by monitoring reports from the PIU indicating progress in implementation and any challenges encountered as appropriate.

Good International Industry Practices Relevant to the Project's E-waste Management Plan

(a) End-of-Life Management for ICT Equipment, ITU 2012: https://www.itu.int/dms_pub/itu-t/oth/4B/04/T4B0400000B0013PDFE.pdf
(b) Palestinian Hazardous Waste Management System, No. 6 2021: https://www.molg.pna.ps/uploads/files/%D9%86%D8%B8%D8%A7%D9%85%20%D8%A7%D8%AF%D8%A7%D8%B1%D8%A9%20%D8%A7%D9%84%D9%86%D9%81%D8%A7%D9%8A%D8%A7%D8%AA%20%D8%A7%D9%84%D8%AE%D8%B7%D8%B1%D8%A9%20%D8%B1%D9%82%D9%85%20(6)%20%D9%84%D8%B3%D9%86%D8%A9%202021_69e6eb5ebbae48b3b8e5e6b05fa95aa8.pdf
(c) Palestinian Cabinet Decree on Adopting the General Policy for the Disposal and Treatment of Electronic Waste – June, 2021 (02/113).
(d) Success Stories on E-waste Management, L Supplement.27, ITU 2016: https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-L.Sup27-201610- I!!PDF-E&type=items
(e) Environmental, Health, and Safety Guidelines for Telecommunications, IFC, the World Bank Group: https://www.ifc.org/wps/wcm/connect/25b87632-c01d-4a89-b149-21c1124730a4/Final%2B-%2BTelecommunications.pdf?MOD=AJPERES&CVID=nPtjCyb&id=132315234382 8
(f) Environmental, Health, and Safety (EHS) Guidelines GENERAL EHS GUIDELINES: ENVIRONMENTAL, WASTE MANAGEMENT:https://www.ifc.org/wps/wcm/connect/456bbb17-b961-45b3-b0a7-c1bd1c7163e0/1- 6%2BWaste%2BManagement.pdf?MOD=AJPERES&CVID=nPtgwEW
(g) Implementation Guidelines for E-waste Management Rules, CPCB India, 2016: https://cpcb.nic.in/displaypdf.php?id=aHdtZC9HVUlERUxJTkVTX0VXQVNURV9SVUxFU18yMDE2LnBkZg==

Monitoring roles and responsibilities

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.

The PIU implementing the EARDIP-related activities of this project will be responsible for overall monitoring and evaluation of this E-Waste Management Plan. Monitoring must be performed throughout the project life cycle. The results of the monitoring reports will be submitted to the Bank. The PIU should also provide training and capacity building on e-waste management.

The Bank will provide supervision on compliance and commitments made in the E-Waste Management Plan. The Bank will further undertake monitoring during its scheduled project supervision missions. Specifically, for each year that the agreement is in effect, the PIU will be required to submit regular the monitoring reports to the Bank as part of its project progress reports and the Bank will review these reports and provide feedback.

Table 17 E-Waste Management/Disposal Plan

Issue: Procurement and Provision of Electronic Devices (computers, printers, servers, cables etc)			
Impact	**Mitigation**	**Monitoring**	**Responsibility**
Air Pollution through improper disposal Which leads to release of toxic, hazardous, and carcinogenic gaseous. **Human Health** Electrical and electronic equipment contain different hazardous materials, which are harmful to human health. For instance, bio-accumulative toxins (PBTs) are harmful to human health and have been associated with cancer, nerve damage and reproductive disorders. Chronic exposure to arsenic can cause lung cancer and can often be fatal. Also, exposure to barium can lead to brain swelling, muscle weakness, damage	Procure Electronic devices from credible manufactures to avoid purchasing second hand, refurbished or obsolete devices with a short shelf life or already categorized as E-Waste. If possible, select sources offering repair and take back schemes. Ensure insurance coverage and electronic physical protective devices are fitted. Reuse and recycle all E-waste where applicable and possible. Establish E-Waste collection points in all project sites, including collection bins/receptacles. Conduct awareness and sensitization targeting the users of the electronic devices to ensure that they engage in best	Warranty and take back schemes for Electronic Devices purchased. Credibility of manufacturers supplying the electronic devices Availability of E-waste receptacles in each project site. Number of awareness and training conducted for users of electronic devices on E-waste E-waste certificates of disposal using licensed hazardous waste contractors and licensed hazardous waste landfills/disposal facilities.	PIU

to the heart, liver, and spleen. **Pollution of water bodies** Electrical and electronic equipment contain different hazardous materials, which are harmful to human health and the environment including ground and surface water if not disposed of carefully.	practice for E-waste management.		
Pollution of land resources including landfills Electrical and electronic equipment contain different hazardous materials, which are harmful to human health and the environment including soil if not disposed of carefully.	Procure Electronic devices from credible manufactures to avoid purchasing second hand, refurbished or obsolete devices with a short shelf life or already categorized as E-Waste. If possible, select sources offering repair and take back schemes. Ensure insurance coverage and electronic physical protective devices are fitted. Reuse or Recycle all E-waste. Establish E-Waste Collection Centres in all project sites, including collection bins/receptacles. Use licensed hazardous waste contractors and	Warranty and take back schemes for Electronic Devices purchased. Credibility of manufacturers supplying the electronic devices. Availability of E-waste receptacles in each project site. Number of awareness and training conducted for users of electronic devices on E-waste E-waste certificates of disposal using licensed hazardous waste contractors and licensed hazardous waste landfills/disposal facilities.	PIU

	licensed hazardous waste landfill sites/disposal facilities. Create and maintain records of all E-waste items for disposal, securely store and prepare for shipment correctly. Conduct awareness and sensitization targeting the users of the electronic devices to ensure that they engage in best practice for E-waste management.		
Growth of informal E-waste disposal centres. Improper and indiscriminate disposal of E-waste is likely to lead to the exponential increase of informal waste disposal centers in communities near project sites which may further exacerbates the problem of E-waste.	Procure Electronic devices from credible manufactures to avoid purchasing second hand, refurbished or obsolete devices with a short shelf life or already categorized as E-Waste. If possible, select sources offering repair and take back schemes. Ensure insurance coverage and electronic physical protective devices are fitted. Reuse or Recycle all E-waste. Establish E-Waste Collection Centres in all project sites, including collection bins/receptacles. Use licensed hazardous waste	Warranty and take back schemes for Electronic Devices purchased. Credibility of manufacturers supplying the electronic devices. Availability of E-waste receptacles in each project site. Number of awareness and training conducted for users of electronic devices on E-waste. E-waste certificates of disposal using licensed hazardous waste contractors and licensed hazardous waste landfills/disposal facilities.	PIU

	contractors and licensed hazardous landfill sites/disposal facilities. Create and maintain records of all E-waste items for disposal, securely store and prepare for shipment correctly. Conduct awareness and sensitization targeting the users of the electronic devices to ensure that they engage in best practice for E-waste management.		

ANNEX 6: SAMPLE INCIDENT REPORT

World Bank Incident Classification guide:

Indicative

- Relatively minor and small-scale localized incident that negatively impacts a samll geographical areas or small number of people
- Does not result in significant or irreparable harm
- Failure to implement agreed E&S measures with limited immediate impacts

Serious

- An incident that caused or may potentially cause significant harm to the environment, workers, communities, or natural or cultural resources
- Failure to implement E&S measures with significant impacts or repeated non-compliance with E&S policies incidents
- Failure to remedy Indicative non-compliance that may potentially cause significant impacts
- Is complex and/or costly to reverse
- May result in some level of lasting damage or injury
- Requires an urgent response
- Could pose a significant reputational risk for the Bank.

Severe

- Any fatality
- Incidents that caused or may cause great harm to to the environment, workers, communities, or natural or cultural resources
- Failure to remedy serious non-compliance that may potentially cause significant impacts that cannot be reversed
- Failure to remedy Serious non-compliance that may potentially cause severe impactsIs complex and/or costly to reverse
- May result in high levels of lasting damage or injury
- Requires an urgent and immediate response
- Poses a significant reputational risk to the Bank.

An incident report should contain the following information:

Incident Report Form

Please report any incident within 24 hours to the PIU

Implementing Partner	
Subproject / Activity	
Report Date	
Reported By (Name and Title)	

i. Details of Incident

Incident Date	
Incident Time	
Incident Place	

ii. Identification of Type of Incident and Immediate Cause

1. Select the type of the incident from the list below. An incident can be classified at the same time as H&S/environmental/social.

Type of Incident: (and incident can cover more than one type):

Type of Incident – Health & Safety		Type of Incident – Social	Type of Incident - Environmental
Moving Machinery/vehicles at project site	Dust, Fumes, Vapours that impact the population and/or environment	Misuse of government property	Chemical/Oil Spill with impact on population and/or environment
Powered Hand tools	Noise	Damage to Cultural Heritage	Improper Disposal Waste
Hand Tools	Temperature or heat	Occurrence of infringement of labor rights	Disasters (Earthquake, Flood, etc)
Animals or insects	Overexertion	Occurrence of infringement of human rights	Water Pollution/ Sedimentation
Fire or Explosion at project site	Structural Failure	Strike, demonstration	Damage to ecosystems (e.g. damage to flora/fauna)
Trips & smaller falls	Chemical/biological	Other (please specify)	Odor air Emissions
Drowning	Stress	GBV/SEA or Child Risks	Dust, Fumes, Vapors, Air pollution with impact on population and/or environment
Borrow-pit Management	Other (please specify)		Other (please specify)

2. For each type of incident, select the relevant descriptor(s) from the list. You can select up to 5 descriptors for each type of incident. If a descriptor is not listed below, please type in short descriptor in "Other". Add more rows as necessary.

Incident Type	Descriptor 1	Descriptor 2	Descriptor 3	Descriptor 4	Descriptor 5	Other
H&S						
Social						
Environmental						

Provide a description of the immediate cause of the incident:

iii. Description of the Incident

Record all facts prior to and including the incident, if it was a planned activity, describe/list material, ecosystem and property damaged, etc:

iv. Root Cause Analysis

Select the root cause(s) of the incident from the list below. If 'Other', please specify:

Root Cause	Yes	No
Improper Planning		
Poor Maintenance		
Poor Supervision		
Poor Quality of Equipment		
No rules, standards, or procedures		
Lack of knowledge or skills		
Improper motivation or attitude		
Failure to comply with rules		
Other		

Additional Questions:
- Is the incident still ongoing or is it contained?
- Is loss of life or severe harm involved?
- What measures have been or are being implemented by the Implementer?

ANNEX 7: LABOR MANAGEMENT PROCEDURES (LMP)

The World Bank's Environmental and Social Standard 2 (ESS2) - Labor and Working Conditions and ESS4 - Community Safety and Health were among others identified as applicable for the project. These Labor Management Procedures (LMP) were prepared in accordance with the requirements of ESS2. The purpose of the LMP is to explain how the Project Implementation Unit (PIU) and her contractors will manage all project workers in relation to the associated risks and impacts, and in accordance with National Law and ESS 2. The objectives of the LMP are to:

(a) Identify the different types of project workers that are likely to be involved in the project
(b) Identify, analyze and evaluate the labor related risks and impacts for project activities
(c) Set out procedures to meet the requirements of ESS2, ESS4 and applicable national legislation.

The LMP will be applied in line with the requirements of national laws, the interrelatedness of ESS2 with other ESSs in general, and ESS4 in particular.

The LMP will be administered to different types of project workers as follows:

(a) Direct Workers. People employed directly by the project to work specifically for the PIU in Juba. Under this category are further included staff or Technical Assistance (TA) consultants who perform work related with core functions in the project
(b) Contracted Workers. People engaged through third parties to service the project, regardless of location. This category includes workers of contractors contracted to conduct public works. It will further include GoSS staff and NGO staff providing services.
(c) Primary Supply Workers. People engaged by the project or contractors as primary suppliers. These include, for example, suppliers of construction materials.

The LMP will apply to project workers including full time, part-time, and temporary. The project scope does not have chances of employing migrant workers.

Labor Requirements Forecast for the Project

It is anticipated that labor will be used as follows:

Table 18 Anticipated Labour Use in the Project

Component	Type of Workers	Number of Workers	Gender	Timing
Component 1: Connectivity market development and integration.	• Direct workers from the PIU and MICT&PS; • Contractors' technical staff and administrators • Consultant Engineers' technical, safeguards, and administrative staff • Contracted workers • Primary supply workers	The direct workers will approximately be 20 staff For construction works 15-20 skilled labors may be involved at a site In case the contractor does not have appropriate machinery	Male and female labor at all levels and categories.	During design and implementation
Component 2: Data market development and integration.	• Direct workers from the PIU and Ministry of ICT; • TA staff supporting cybersecurity capacity	Direct workers will be ca. 20 staff TA staff will be ca. 20 staff Contractors' technical staff may be app. 30 staff	Male and female labor at all levels and categories.	During design and implementation

Component	Type of Workers	Number of Workers	Gender	Timing
	development, law and policy. ● Contractors' technical staff and administrators			
Component 3: Online market development and integration.	● Direct workers from the PIU and MICT&PS; ● Contractors' technical staff and administrators ● TA staff supporting digital research and education capacity development.	Direct workers will be ca. 20 staff TA staff will be ca. 20 staff	Male and female labor at all levels and categories.	During design and implementation
Component 4: Project management and implementation support.	● Direct workers from the PIU and MICT&PS; ● Consultants supporting project design and implementation at the PIU level including safeguards and sustainability advisors	Direct workers will be ca. 20 staff	Male and female labor at all levels and categories.	During design and implementation

Brief Overview of National Labor Legislation-Terms and Conditions

Working hours

The Labor Law (42.(1)) of South Sudan establishes general working hours of 8 hours per day and 48 hours per week, broken by a paid period of rest of not less than half an hour per day for eating and resting. Article 42 (2) states that the competent authority may issue an order to amend for certain periods of the year or for certain categories of workers, as required by the nature and type of work, the weekly or daily hours or work or the periods of rest to be taken during these hours. 42 (3) stipulates that, working hours shall be reduced by one hour during the month of Ramadan for workers who fast and for breastfeeding mothers for two years as from the date of birth of their child, provided that this hour is paid.

Age of employment

The Labor Law (12.2) stipulates that no shall engage or permit the engagement of a child under the age of 14 years to perform works defined as worst forms in the same Act. A child who has attained the age of 12 (12.4) may be engaged to perform light works as long as it is not harmful for the child's health or safety, or the child's welfare and development and does not interfere with the attendance of school. No person shall engage or permit the engagement of a child under the age of 18 in hazardous work (12.6.). However, this Project only allows engagement generally from the age of 18.

Leave

Under the Labor Law (59.1), an employee shall be entitled for a weekend holiday not less than 24 consecutive hours. All public holidays shall be observed on calendar days. An employee is entitled to annual leave with full pay as follows: a) after continuous service of one year or more but less than three years 21 working days per year; b) after continuous service of 3 years or more but less than 15 years 25 working days per year; c) after continuous service of 15 years or more, thirty working days of

leave per year (60.1). Types of other leave defined in the law include sick leave; maternity leave; paternity leave; compassionate leave; and unpaid leave; leave for vocational or union trainings;

Code of Conduct
A code of conduct for workers and employers should be developed for the Project, emphasizing labor, health and safety, environmental and social issues, including GBV. The obligations of the code should apply to all Project workers.
The Code of Conduct should be a summary document, written in simple language. It should be available in English and local languages and should be explained orally to the worker in the local languages of the subproject region prior to signing. It will also be the subject of discussion in internal training/capacity building sessions promoted by the employer.

The individual code should be signed by each employee, preferably at the signing of the contract, and a copy kept by both parties (employee and employer). In the case of workers hired prior to the project, they should sign at the planning and mobilization phase of the subproject, that is, before the practical activities under the Project begin.

By signing the Code of Conduct, the employee confirm that:

- Received a copy of the Code;
- Have had an explanation of the Code;
- Recognize that adherence to this Code of Conduct is a condition of working on the project;
- Recognize that violations of the Code may result in serious consequences, up to and including dismissal or referral to legal authorities

Labor Risk Assessment

As part of the labor risks and impacts identification, the following activities will assist in understanding the risk exposure pathways. Nonetheless, these are only key risks related to workers of predictable activities. A more detailed analysis will be possible at the stage when sub-project or project lot designs are ready.

(a) The main types of activities for contracted workers and supply workers will relate to the construction of the planned facilities - including more complicated civil works (heavy equipment).
(b) Other types of activities for contracted workers will be the delivery of services.

The table below draws from the anticipated labor requirements analysis to highlight and analyze the potential labor related risks and impacts in view of the general baseline settings of the project areas.

Table 16: Labor Risk Identification and Analysis

Risk/Impact	Analysis (Magnitude, Extent, Timing, Likelihood, Significance)	Risk Mitigation Measures
Labor practices are not in accordance with South Sudan national laws and international standards.	There are some gaps between South Sudanese labor laws and international standards / ESS 2 (for example in regard to child labor, see below. See Annex 13 for legal and policy review and legal gap analysis).	Through the implementation of this LMP the gaps are addressed. In addition, the Project will ensure management of contractors and implementing partners to maintain the highest standards of labor practice.
Underpayment of contracted workers or supply workers	Since South Sudan has no statutory minimum wage, there is a risk that local contractors and sub-contractors underpay the contracted or supply workers.	Project to set minimum wage and to pay workers what they were contracted for, and ensure management of contractors and implementing partners to be accountable on it.
Labor disputes over contracts	Given the generally high conflict potential, it is possible that disputes over will emerge.	The project will provide workers' GRM as well as general project GRM in line with ESS 2.
Deployment of immigrant/migrant workers without required permits	Significant amounts of unskilled jobs are filled by immigrant workers. These require work permits, which can be subject to lengthy processes. The risk therefore exists that local contractors contract migrant workers without appropriate permits in country.	The project will not deploy immigrant workers without the requisite documentation.
Poor working conditions: Unsafe work environment	Due to the protracted conflict in South Sudan and the weakness of formal justice institutions, employees' working conditions are poor.	Supervision of contractor Labor Management practices is essential to mitigate against this risk. A contractor checklist will be used. Contractors will sign codes of conduct to commit to safe work environments. Implementation of workers' GRM as a feedback system to flag out poor working conditions and address them.
Poor working conditions: lack of workers' rights	Labor laws in South Sudan have been criticized for their lack of enforcement. This is not surprising given that the formal justice sector is generally extremely weak.	The project will ensure through rigorous workers' GM, that workers can articulate violations of their rights and receive redress. In addition, the Project will ensure management of contractors and implementing partners if any.
Injuries at the workplace / OHS risks	Given that PPE may be scarce for contracted workers, and health and safety regulations may not exist or be enforced.	Contractor occupational risk assessments and mitigation plans will be devised and implemented. Workers will be trained on OHS risks, hazards and safe handling of equipment and procedures, based on WBG EHS Guidelines on OHS. Appropriate PPE will be provided. GM/workers' GRM will be communicated and implemented. ESMPs will be developed including OHS. OHS requirements will be included

Risk/Impact	Analysis (Magnitude, Extent, Timing, Likelihood, Significance)	Risk Mitigation Measures
		in bids and contracts. Contractor bids and contracts will include various OHS requirements.
Child labor utilization	The general minimum age for work is 14 (which is in accordance with ILO standards on minimum age where a country's economy and educational facilities are insufficiently developed). Children between the ages 14 and 18 are prohibited from engaging in the worst forms of child labor and violating international standards. Compulsory education to age (13) is inconsistent with minimum age for work (14).	The minimum age of 18 will be enforced in recruitment and in daily staff team talks by contractors. PIU will also supervise this through the Contractor Management Checklist. The age of workers will be verified upon hiring. A track record search will be conducted of the contractors at the bidding process (record of health and safety violations, fines, consult public documents related to workers' rights violations, GBV/SEA/SH issues etc.) Awareness raising will be provided to communities/suppliers to discourage engagement in child labor.
Worst forms of child labor	The Labor Act lacks clarity on prohibitions on the worst forms of child labor. Article 12(2) allows children between the ages 14 and 18 to engage in the worst forms of child labor, violating international standards. In practice, children in South Sudan engage in armed conflict and in cattle herding. The national army continues to recruit, sometimes forcibly, children to fight opposition groups. Children are further engaged in other worst forms of child labor, including in commercial sexual exploitation. Perpetrators have not been brought to justice. Furthermore, hazardous work falls under the worst form of child labor.	The project will not recruit any workers for hazardous work and will enforce the minimum age of 18 for all workers. In addition, the Project will ensure management of contractors and implementing partners. A track record search will be conducted of the contractors at the bidding process (record of health and safety violations, fines, consult public documents related to workers' rights violations, GBV/SEA/SH issues etc.).
Forced Labor	Forced labor takes place in South Sudan, for example in regard to recruitment into the national army. There is hence a risk that forced labor will be deployed under the project	Contractors' obligations will be spelled out in their respective contracts and the PIU will monitor full compliance.
GBV/SEA	There is a high incidence of sexual harassment of female workers by male workers, and discrimination in recruitment and employment of women generally.	Contractors are compelled to safeguard the interests of women, including gender parity at the workspace, prohibiting sexual harassment and other forms of GBV toward female workers by other project workers, appropriate sanitation facilities at workplace, and appropriate PPE for women, as well as the signing of a CoC

Risk/Impact	Analysis (Magnitude, Extent, Timing, Likelihood, Significance)	Risk Mitigation Measures
Labor influx and GBV	There is likely to be internal movement of people from areas outside the project areas to seek employment and associated benefits from within targeted communities. Furthermore, contracted workers may be brought into communities to conduct construction works. Population movement due to labor influx may result in GBV/SEA cases, and the spread of communicable diseases including Covid-19.	PIU and all contractors will implement the Labor Influx Management Procedure (provided in this LMP); a GBV/SEA Action Plan will be implemented, including the singing of CoCs by all workers. A local workforce minimum content for the contractors will be set up and disclosed to communities. The Project will aim to maximize the use of local suppliers (for food, water, services etc.).
Spread of diseases in communities, including HIV through labor influx	Population movement due to labor influx may result in the spread of HIV and other diseases.	PIU and all contractors will implement the Labor Influx Management Procedure (provided in this LMP), including sensitization on preventing common diseases. Communication of risks will be conducted through locally appropriate means – targeting specific social groups and genders.
Spread of COVID-19	Given the ongoing Covid-19 pandemic, there is a risk that COVID-19 spread at construction sites.	COVID-19 protocols will be followed at construction sites
Traffic risks and road safety	Construction activities can cause traffic risks and jeopardize road safety for drivers.	The project will implement training and licensing of industrial vehicle operators in the safe operation of specialized vehicles; ensure drivers undergo medical surveillance; establish rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures; include traffic and road safety into the daily toolbox talks; emphasize safety aspects among drivers; improve driving skills of drivers; adopt limits for trip duration, e.g. 8 hours at a time; arrange driver rosters to avoid tiredness; preassign routes by construction vehicles (project management, contractor, and traffic authorities) before construction starts. Regular maintenance of vehicles and use of manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction.
Lack of safety and security for project workers, project- affected persons and assets	Given the fragility in the country, there is a risk of security for all project workers and beneficiary communities in some regions.	A Security Risk Assessment will be conducted, and local Security Management Plans (SMP) prepared for each sub-project or project lot. Local Security Activity Plans – as per Project SMP (separate confidential document) will be prepared and implemented

Risk/Impact	Analysis (Magnitude, Extent, Timing, Likelihood, Significance)	Risk Mitigation Measures
Risks associated with hiring security personnel	Security personnel may be recruited to provide security at some subproject sites or for specific activities.	The Project SMP will be implemented. The project will implement standards, protocols and CoCs for the selection and use of military and security personnel and screen such personnel to verify that they have not engaged in past unlawful or abusive behavior, including sexual exploitation and abuse (SEA), sexual harassment (SH) or excessive use of force. The PMU will enter into a memorandum of understanding (MoU), with the Ministry of Defense setting out the arrangements for the engagement of the military and security personnel under the Project. PIU will ensure that such personnel are adequately instructed and trained, prior to deployment and on a regular basis, on the use of force and appropriate conduct (including in relation to civilian-military engagement, SEA and SH, and other relevant areas), as set out in the Project Operations Manual, SRAMP and LMP

Institutional Arrangement for Implementation of LMP

Given the categories of project workers (direct workers, contracted workers, primary supply workers), this section lays out the operational arrangements amongst the various institutions that will implementing the Project and ensures the smooth implementation of the LMP. The requirements of the LMP apply to all categories of project workers and where there is a special emphasis for a particular category of workers, this will be highlighted within the applicable section of the LMP.

Direct Workers are those workers employed by the PIU and GoSS, specifically for the Project. The requirements of the LMP as applicable to the direct workers will be the responsibilities of the PIU and GoSS. The PIU will however have an oversight role through direct reporting arrangements on the requirements of the LMP in particular and other ESMF requirements in general.

Contracted workers are those who will be employed by contractors, NGOs and other third parties to execute project activities. The PIU has the responsibility to ensure LMP implementation at the interface with its respective contractors and sub-contractors and oversee the LMP implementation at all levels.

The Primary Suppliers are identified at the sub-project/project level by GoSS or contractors or directly during sub-project screening and the applicability of the LMP will be affirmed at that time. The PIU has the mandate to ensure that all the procedures for primary supply workers are observed. ESS2 applies a proportionality approach to oversight responsibility towards suppliers. That being said it is important that the project ensures minimum conditions in cases like quarries, or camp service suppliers, or any activities ongoing within construction sites.

The approach to the implementation of this LMP is that all the provisions of the LMP are applied to all project workers. In some cases, special mention for a particular category of project worker is required.

Key Procedures

The Project is guided by the recognition of the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. It will promote sound worker - management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

Rationale for Key Procedures

The PIU, GoSS and contractors, and all project workers will follow up in ensuring the full accomplishment of the objectives of ESS2 and ESS4 in particular. During the gap assessment, there are some aspects that are completely covered through legislation, while other aspects are not completely covered by legislation will be satisfied through reference to the World Bank's sector specific guidelines on good practices on OHS.

Recruitment and Replacement Procedure

Procedure Objective

The objective of this procedure is to ensure that the recruitment and placement process of project staff is conducted in a non-discriminatory manner and that employees are inducted to all essential work-related matters including safeguards issues.

Procedure

1. Contractors submit a recruitment plan to PIU and Supervision Consultant as appropriate for review and approval. The following details will be shown:
    i. Number of staff required
    ii. Intended working condition

iii. Intended locations of staff
iv. Job specifications in terms of qualification and experience

2. Contractor publishes the job invitation in the appropriate media (local press or direct invitation) to ensure all potential candidates have access to the information, including women and persons with disabilities, actively addressing risks of nepotism, or other forms of recruitment or employment discrimination.

3. Shortlist and recruit candidates ensuring the following;

   i. As far as possible, 50% shortlisted candidates are women.
   ii. As far as possible, 50% engaged employees are women.
   iii. Screen out candidates under the age of 18 years.

4. On recruitment, ensure a contract of employment is signed voluntarily.

5. At the point of hiring, the contractor will ensure the employee is inducted on the essential work related issues, which include the following;

   i. Key Job Specifications
   ii. Terms and Conditions of Employment
   iii. Code of Conduct (sample CoC provided in this LMP)
   iv. Disciplinary Procedures
   v. Workers' GRM
   vi. Freedom to join and participate fully in Workers Association activities, Employment Council or Trade Union
   vii. Key E&S aspects of the Project and the ESMF and other E&S instruments
   viii. Emergency Preparedness

6. Maintain all such employment records available for review by the PMU, the World Bank, or Regulatory Authority.

Occupational Health and Safety (OHS) Procedures

(a) Objective of procedure
The objective of the procedure is to achieve and maintain a healthy and safe work environment for all project workers and the host community.

b. Procedure

1. On procurement for contractors, PIU will avail the ESMF, ESMP or other relevant E&S instruments to prospective bidders so that contractors include the budgetary requirements for OHS and community health and safety measures in their respective bids.

2. The contractors will develop and maintain an OHS management system that is consistent with the scope of work, duration of contract and World Bank General Environmental Health and Safety Guidelines (EHSGs) on Occupational Health and Safety.

3. Contractors will adopt the sub-project/lot ESMPs and develop a Contractor Environmental and Social Management Plans (C-ESMPs) to help manage construction risks.

4. Contractors appoint an appropriately qualified and experienced OHS/Environmental Officer whose responsibilities is to advise the employer on an OHS related issues and to provide daily oversight to ensure OHS management is implementedand is effective.

5. Contractors hire appropriately qualified and experienced social safeguards officer to manage social risks including labor risks identified in this LMP.

6. Contractors prepare task-specific risk assessment (TRA) and safe working procedures (SWP) for executing the works;

7. Contractors provide preventive and protective measures, including modification, substitution or elimination of hazardous conditions or substances informed by TRA and SWP.

8. Contractors provide for appropriate training/induction of project workers and maintenance of training records on occupational health and safety subjects including TRA and SWP.

9. Contractors document and report on occupational accidents, diseases and incidents.

10. Contractors provide emergency prevention and preparedness and response arrangements to emergency situations including and not limited to:
    - Workplace accidents
    - Workplace illnesses
    - Flooding
    - Fire outbreak
    - Disease outbreak
    - Labor unrest and
    - Security

11. Contractors comply with all requirements of applicable occupational Health and Safety legislation and Environmental legislation including WB EHS guidelines.

12. Contractors shall maintain all such records for activities related to the safety, health and environmental management for inspection by the PIU or GoSS.

Contractor Management Procedures

a. Objective of procedure

The objective of this procedure is to ensure that PIU has contractual power to administer oversight and action against contractor non-compliance with this LMP.

b. Procedure

i. PIU shall avail all related documentation to inform the contractor about their requirements for effective implementation of the LMP.

ii. Before submitting a bid for any contracted work, the contractor shall incorporate the requirements of ESMF and all other relevant E&S instruments.

iii. Contractors shall formulate C- ESMPs as required by the ESMF and specifically the LMP including:
    - OHS plans
    - Labor Recruitment Plan
    - CoCs for employees

- Waste management plan
- Emergency plan

iv. Contractors to submit the progress reports on the implementation of the LMP and allow PIU access to verify the soundness of the contractor's implementation of the requirements of the LMP.

v. Where appropriate, PIU may withhold contractor's payment until corrective action(s) is/are implemented on major noncompliance to the LMP. The following are some of the major noncompliance that contractors need to take note of:

- Failure to submit mandatory quarterly progress report
- Failure to avail for inspection specified documentation pertaining to the implementation of the ESMP, C-ESMP and LMP
- Failure to timely notify and submit incident and accident investigation report
- Failure to appoint or replace a competent and experienced EHS officer
- Failing to enforce C-ESMPs including provision of adequate appropriate PPE

Labor Influx Procedure

a. Objective of the procedure

The objective of this procedure is to capacitate PIU and all contractors to mitigate the labor influx risk and impacts. The influx of workers and followers can lead to adverse social and environmental impacts on local communities, especially if the communities are rural, remote or small. Such adverse impacts may include increased demand and competition for local social and health services, as well as for goods and services, which can lead to price hikes and crowding out of local consumers, increased volume of traffic and higher risk of accidents, social conflicts within and between communities, increased risk of spread of communicable diseases, and increased rates of illicit behavior and crime, including GBV cases.

b. Procedure

i. Contractor shall ensure that all non-technical work is reserved for locals (identifiable with the host community and witnessed by host community leadership).

ii. Beneficiary selection and employment recruitment should verify the authenticity of the localness of potential employees.

iii. Contractor liaises with local leadership on enrolment for workers while at the same time ensuring that no grievances derive from nepotism via utmost transparency in the selection process, announcing hiring campaigns early enough in community consultations and/or other outreach activities.

iv. Where there are camp establishments, contractor shall ensure camp management and community relations are good. If labor camps are required, special management plans need to be developed, or if smaller establishment, camp management reflected in the ESMP.

- Security within camp
- Social relations with community members should be cordial and consistent with GBV and SEA
- Waste management
- Water and sanitation

- Proper camp demobilization

v. Establish Code of Conduct for contract workers interaction with the host community. This may include:

- Access to camp by children, non-employed girls and women
- Appropriate language
- Time restrictions where required
- GBV/SEA
- Good conduct if small numbers of workers are accommodated in communities rather than camps

vi. Contractors should have own supply or pay for accommodation offered by community to contracted employees.

vii. Contractors shall ensure that local supply shall not negatively impact the availability of resources for the local communities and sourcing of local wildlife shall be prohibited.

viii. Contractor shall provide a fully equipped first aid kit.

ix. Contractors to mainstream HIV issues in the workplace by providing HIV prevention training during induction and continuously during employment through health and safety talks.

x. Contractor to be fully aware of and be ready to implement the Workers' GRM.

Procedure for Primary Suppliers

Primary supply workers are employees of suppliers who, on an ongoing basis, provide goods and services to the project. PIU has oversight of the implementation of the LMP requirements in this category.

Objective of the procedure

The objective of the procedure is to ensure that labor-related risks to the project from primary supply workers are managed in line with the requirements of ESS2.

Procedure

PIU will undertake the following measures:

i. Procure supplies from legally constituted suppliers. The legal registration ensures that the company is legally obliged to comply with all applicable labor laws in South Sudan including the Labor Act, which makes it possible to assume mainstreaming of the labor laws within the supplier's firm. This will include ensure evidence of:

- Certificate of incorporation
- Tax Clearance
- Value Added Tax certificate
- Registration of supplier with regulatory body for the goods or services where required

ii. Make a physical check on the supplier's labor management system, including parameters in appendix C where applicable, including:

- employee contracts
- occupational safety and health

- any past work-related environmental or occupational incidents
- workers committee in place

iii. Check products quality certification and environmental rating where required

iv. Undertaking to take back waste for reuse, for example containers and packaging where applicable

v. Possibility of training in safe use of product by community users where applicable

vi. where potential child labor or forced labor or serious safety risks are identified in a specific sector or industry, in connection with the supply of goods, a mapping exercise should be conducted to identify suppliers relying on such goods.

vii. Where it is not possible to identify specific primary suppliers, the mapping should identify general industry labor issues relating to the supply of the respective goods.

Further, given allegations forced labor risks associated with the polysilicon suppliers, bidders are required to provide two declarations: a Forced Labor Performance Declaration (which covers past performance), and a Forced Labor Declaration (which covers future commitments to prevent, monitor and report on any forced labor, cascading the requirements to their own sub-contractors and suppliers).

In addition, the Recipient will include enhanced language on forced labor in the procurement contracts.

Workers' Grievance Redress Mechanism

The objective of the Workers' Grievance Redress Mechanism (Workers' GRM) is to settle the grievance between an employer and employee or between employees bilaterally before resorting to formal dispute resolution, except in cases where the grievance constitutes a criminal offense that requires notifying law enforcement. The Workers' GRM are in accordance with the provisions of ESS2 and apply to all direct and contracted workers.

Assess and Clarify. Workers will be informed of this grievance mechanism at the time of recruitment and the measures put in place to protect them from any reprisal for its use. Contractors induct the employee on the applicable workers' grievance redress mechanism. Induct all project workers to be aware of their rights. All records of induction shall be kept and made available for inspection by PIU. Workers will further receive easily accessible information on the contractual details, as well as CoCs included. They can further request clarifications on any contractual issues from the employer at any time during the deployment. The provided information will allow the worker to assess whether her or his concern is valid and should be taken up with the employer.

PIU shall contract only contractors with registered code of conduct or who sign an undertaking to comply with the provisions of the Labor Act for contracted workers.

Intake, Acknowledge and Follow-Up. In case of a perceived violation, the aggrieved employee must capture and present the details of the grievance to the person they report to or the supervisor's superior in case of conflict of interest. The supervisor or the supervisor's superior will acknowledge the reception of the reported grievance to the employee.

In case of risk of retaliation, the employee may immediately escalate to the court system. If confidentiality is requested, the PIU will ensure it to avoid any risk of retaliation, including in its follow-up actions.

Verify, Investigate and Act. The supervisor or the supervisor's superior will verify the details and seek to address the matter within the shortest time (up to 48 hours). They will escalate the matter if not resolved within 48 hours if a resolution is not found.

Where no resolution is found, the employee can escalate the matter to the sector specific institutions or courts who will resolve the matter between employer and employee. The Supreme Court's decision is final, where it has exercised lawful jurisdiction.

Where the formal courts are not accessible, do not exist in an area, or cannot render a judgment, the matter shall be reported to and handled under the PIU, for example through the Project GM. The PIU, in this case, will accommodate a fair agreement between the worker and the contractor.

Monitor, Evaluate and Feedback. The contractor shall keep records of all proceedings of grievance redress that are within their jurisdiction and furnish PIU as part of the periodic progress reporting. PIU will provide analytical synthesis reports on a quarterly basis to the PIU, which include the number, status and nature of grievances to the PIU. These reports will form the basis of all regular reports to the World Bank.

PIU will further provide an excel sheet summary of the feedback and grievances reported, which will be linked to the Project's Management Information System (MIS) and to the Results Framework. It will further maintain a documented record of stakeholder engagements, including a description of the stakeholders consulted and a summary of the feedback/grievances received during community consultations.

For grievances related to sexual nature, please refer to the above GRM and the GBV/SEA/SH Action Plan.

WB's Grievance Redress Service (GRS). Project workers who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service . For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

Monitoring and Supervision

The performance monitoring of this LMP will follow the same institutional arrangement as the monitoring and supervision of the ESMF. Detailed mechanisms are laid out above in the monitoring section of the ESMF. In general, the PIU will be responsible for the monitoring of the implementation of the LMP. In particular, the Social Specialist in the PIU will work directly with the Supervision Consultants' Social Specialists to ensure that the LMP is fully implemented.

The PIU Social Specialist will undertake supervision missions and spot checks as per schedule laid out above. Through the initial activity- or site-specific screening process, the UNW Social Specialist will be aware of potential labor-related risks and impacts of activities and will develop a monitoring schedule around these.

Non-compliance of the LMP will be reported to the PIU Project Coordinator and will be taken up in the regular E&S reporting.

Furthermore, the Project will deploy TPM, who will also be tasked to monitor the implementation of the ESMF and associated instruments, such as the LMP.

ANNEX 8: SEXUAL EXPLOITATION, ABUSE & SEXUAL HARASSMENT (SEA/SH) PREVENTION AND RESPONSE PLAN

INTRODUCTION

This SEAH Prevention and Response Action Plan details the necessary operational measures and protocols that will be put in place to address SEAH and other forms of GBV related to the digital acceleration project and how they will be integrated over the life of the project. This includes how to address any SEAH allegations that may arise and procedures for preventing and responding to SEAH. The Action Plan also details how allegations of SEAH will be handled (investigation procedures) and disciplinary action for violation of the Code of Conduct (CoC) by project workers.

Definition of terms

The Inter-Agency Standing Committee (IASC) defines Gender-based Violence as "an umbrella term for any harmful act that is perpetrated against a person's will, and that is based on socially ascribed (gender) differences between males and females. GBV broadly encompasses physical, sexual, economic, psychological/emotional abuse/violence including threats and coercion, and harmful practices occurring between individuals, within families and in the community, at large. These include sexual violence, domestic or intimate partner violence (IPV), trafficking, forced and/or early marriage, and other traditional practices that cause harm.

The United Nations[46] defines "sexual exploitation" as any actual or attempted abuse of a position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another. Sexual abuse on the other hand is "the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. "SEA" is therefore a form of gender-based violence and generally refers to acts perpetrated against beneficiaries of a project by staff, contractors, consultants, workers, and Partners.

Sexual harassment[47] is defined as any unwelcome sexual advance, request for sexual favor, verbal or physical conduct or gesture of a sexual nature, or any other behavior of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation to another, when such conduct interferes with work, is made a condition of employment, or creates an intimidating, hostile or offensive work environment. It occurs between personnel/staff and involves any unwelcome sexual advance or unwanted verbal or physical conduct of a sexual nature.

In the South Sudan GBV Information Management System (GBV-IMS 2020) GBV is categorized slightly differently: rape; sexual assault; physical assault; forced marriage; denial of resources, opportunities or services; and psychological/emotional abuse. The majority of recorded survivors of GBV in South Sudan are women and girls. Armed conflicts in pocket areas, organized violence on sub-national and local scales escalate the risk of GBV, particularly intimate partner violence or non-partner conflict related sexual violence, sexual exploitation, abuse, and harassment. Moreover, economic hardship has made incidents of sexual exploitation, which include transactional sex quite common. The South Sudan, EA-RDIP is likely to worsen the low socioeconomic status and increase other risk factors for women thus exposing them to greater risks of SEA/SH and GBV.

The possibility of deploying external personnel including skilled and contracted workers, to conduct fibre optic laying and base station construction in project locations, could expose communities to increased risks of sexual exploitation and abuse (SEA) or sexual harassment (SH) by project staff or

[46] UN (2020) United Nations protocol on allegations of sexual exploitation and abuse involving implementing partners, page 1-2.
[47] WB (2020) Good Practice Note on Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works.

contractors. This is particularly since the living arrangements of external workers contracted in the project across South Sudan will be unregulated as they will live/camp amidst communities.

Guidance by the WB on GBV/SEA

The WB Guidance Note defines four key areas of GBV/SEA risks:

- SEA - exploitation of a vulnerable position, use of differential power for sexual purpose, actual or threatened sexual physical intrusion;
- Workplace sexual harassment - unwanted sexual advances; requests for sexual favors, sexual physical contact;
- Human trafficking - sexual slavery, coerced transactional sex, illegal transnational people movement; and
- Non-SEA - physical assault, psychological or physical abuse, denial of resources, opportunities, or services and IPV[48].

In response to the potential risks implied in the discussion of the concepts above, the South Sudan EA-RDIP will establish and implement a Sexual Exploitation and Harassment (SEAH) Prevention and Response Plan. The Plan details the operational measures that will be put in place to mitigate the risks of SEAH that are project-related, including ensuring that project-established GMs are in place to receive reports and refer survivors for further support safely and confidentially.

POLICY, LEGAL AND INSTITUTIONAL CONTEXT

International Gender Law for South Sudan

South Sudan is a signatory to several international treaties and conventions related to addressing SEA, SH and GBV.

Convention on the Elimination of all Forms of Discrimination against Women (CEDAW)

CEDAW embodies the obligation to respect (equality in laws and policies); obligation to protect (non-discrimination – direct and indirect); and obligation to fulfil (uphold equality and eliminate gender discrimination in the entire sphere of the social and economic life). Its ratification provided a legal framework for the review of family laws including, but not limited to, age of marriage and eliminating sexual and GBV in South Sudan and showed the commitment of the Government of South Sudan to the issue. It has also given legal legitimacy to criticizing the Government that women should be accorded full dignity of the person, equal with men. South Sudan acceded to the United Nations Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) on the 30th of April 2015.

International Covenant on Economic, Social and Cultural Rights

South Sudan has acceded to this treaty, which aims to ensure the equal right of women and men to the enjoyment of all economic, social and cultural rights. Together with the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights, they make up the International Bill of Human Rights.

National Gender Legislation

Transitional Constitution 2011

The Republic of South Sudan's Transitional Constitution 2011 with Amendments through 2013, Article 5, embodies the principles of equality among all and human rights for all by stating that "South Sudan is founded on justice, equality, respect for human dignity and advancement of human rights and fundamental freedoms.'' The Constitution reinforces the country's commitment to enhance gender equality through Article 14 ("All persons are equal before the law and are entitled to the equal

[48] WB 2018, p.3

protection of the law without discrimination as to race, ethnic origin, color, sex, language, religious creed, political opinion, birth, locality or social status") and in particular Article 16 ("Women shall be accorded full and equal dignity of the person with men; therefore, women should be treated the same way as men and with respect."). Notably, Article 16, Clause 5 states that "[w]omen shall have the right to own property and share in the estates of their deceased husbands together with any surviving legal heir of the deceased." Clause 3 of the same Article guarantees equal rights to women and men to participate in public life, and Clause 4 actively promotes women's participation.

Article 17 of the Constitution states that "a child is any person under the age of eighteen years" and guarantees the basic rights for children, namely right: (a) to life, survival and development; (b) to a name and nationality; (c) to know and be cared for by his or her parents or legal guardian; (d) not to be subjected to exploitative practices or abuse, nor to be required to serve in the army nor permitted to perform work which may be hazardous or harmful to his or her education, health or well-being; (e) to be free from any form of discrimination; (f) to be free from corporal punishment and cruel and inhuman treatment by any person including parents, school administrations and other institutions; (g) not to be subjected to negative and harmful cultural practices which affect his or her health, welfare or dignity; and (h) to be protected from abduction and trafficking."

Penal Code Act 2008

The South Sudan Penal Code Act 2008, Section 247 on rape states that: "(1) Whoever has sexual intercourse or carnal intercourse with another person, against his or her will or without his or her consent, commits the offence of rape, and upon conviction, shall be sentenced to imprisonment for a term not exceeding fourteen years and may also be liable to a fine. (2) A consent given by a man or a woman below the age of eighteen years shall not be deemed to be consent within the meaning of subsection (1), above." However, it adds that: "(3) Sexual intercourse by a married couple is not rape, within the meaning of this section."

Section 246 on criminal intimidation states that: "If the threat is to cause death or grievous hurt or to cause the destruction of any property by fire or to cause an offence punishable with death or with imprisonment for a term not exceeding seven years or to impute unchastity [sic] to a woman, the offender upon conviction, shall be sentenced to imprisonment for a term not exceeding seven years or with a fine or with both."

Other offenses recognized by the Penal Code related to women include those in the following Sections: 223 "Assault"; 225 "Assault or Criminal Force Without Provocation"; 249 "Acts of Gross Indecency"; 250 "Word, Gesture or Act Intended to Insult the Modesty of a Woman"; 251 "Public Indecency"; 255 "Coercing or Inducing Persons for Purpose of Engaging in Sexual Conduct"; 256 "Detaining a Person for Purpose of Engaging in Unlawful Sexual Conduct"; 268 "Incest"; and 259 "Female Genital Mutilation."

Section 243 touches upon "cruelty to children": "(1) Whoever having the charge or care of a child under eighteen years of age or being in a position of authority over him or her, willfully ill-treats or neglects the child, in such a way as to cause him or her unnecessary suffering, commits an offence, and upon conviction, shall be sentenced to imprisonment."

Local Government Act 2009

Section 110 on Rights of Women, reaffirms those in the Transitional Constitution, including promotion of women's participation in public life at the local level and the right to own property and share in the estate of their deceased husbands. Section 109, Gender in the Community, guarantees equality between women and men:

1. The burden of family care within the community shall be a shared responsibility between both parents;
2. Men and Women shall work together in the development of their communities;
3. [not cited in this document]; and
4. All Local Government Councils shall ensure that men and women have access to justice and services in their families, communities and before the courts of law.

Section 108, Clause 5 states, without defining an age of consent, that: "No marriage shall be entered into without the free will and consent of the man and woman intending to marry, with guidance of their respective parents." Section 111, Rights of Children, also reiterates the rights of children enshrined in the Transitional Constitution.

Child Act 2008

The Child Act 2008 is a comprehensive legal framework for realizing child rights in line with the Convention on the Rights of the Child (CRC). It sets out the rights and duties of all parties responsible for the care of children. Section 5 of the Act defines child as "a human being under the age of eighteen years."

Clause 2 of Section 26 of the Act indicates that every female child has: (a) the right of equal participation on a non-discriminatory basis as partners with a male child in social, economic and political activities; (b) equal rights to succession and inheritance to property and reasonable provision out of the estate of a deceased parent without discrimination; and (c) the right to develop their full potential and skills through equal access to education and training. Clause 3 of the same Section adds that: "No female child shall be expelled from school due to pregnancy or motherhood or hindered from continuing her education after one year of lactation." Section 23, Clause 1 states that "[e]very female child has a right to be protected from sexual abuse and exploitation and gender-based violence, including rape, incest, early and forced marriage, female circumcision and female genital mutilation," where child is "a human being under the age of eighteen years" (Section 5 of the same Act).

The Act does not condone discrimination against a child (Section 9) or cruelty to children (Section 57). Section 22 of the Act covers the rights to protection from abuse, which includes "(a) all forms of physical or mental violence, injury, abuse, negligent treatment, maltreatment or exploitation; (b) abduction and trafficking, for any purpose or form, by any person including parents or guardians; (c) sexual abuse, exploitation and harassment including, but not limited to rape, incest, inducement or coercion of a child to witness or engage in a sexual activity; the use of a child in prostitution or other sexual practices; and (d) the use of a child in pornographic performances and materials."

While the Section does not refer to obligation of the witness or the victim to report the incident to the relevant authorities, its Clause 4 states that "whoever commits such an offence shall on conviction, be sentenced to imprisonment for a term not exceeding fourteen years." Section 39 is on parents' duties, including protection of their children from neglect, discrimination, violence, abuse, exploitation, exposure to physical and moral hazards and oppression. Section 128 on judicial orders includes the orders of the Court if it judges that "a child is suffering or is likely to suffer significant harm and if the harm, or probability of harm, is attributable to the care given to the child, or likely to be given to the child if the order were not made[.]" One of them is "an 'exclusion order' requiring a person who has used violence or threatened to use violence against a child, to depart from the home in which the child is residing or to restrain the person from entering the home or from a specified area in which the home is included, or to restrain any other person from taking the child to the person against whom the child needs protection for such period as the Court may specify." The Section does

not specify how such incidents should be reported or how the perpetrators may enter the justice system.

Other Documents and Instruments on Women and Children

The National Gender Policy of South Sudan 2012 envisions a country that is free from all forms of discrimination and violence, and where women and whose men and children enjoy their human rights on the basis of equality and non-discrimination in all spheres of national life. Among the four guiding principles of the National Development Strategy 2018, rights of women appear under "Peace, Security, and Rule of Law" and empowerment of women under "Socio-economic Development." The subject of gender is recognized as crosscutting.

In 2015, the Ministry of Gender, Child Social Welfare developed the South Sudan National Action Plan (SSNAP) 2015-2020 on United Nations Security Council Resolution (UNSCR) 1325 and Related Resolutions. Under the objectives of UNSCR 1325 (protect women's rights during armed conflicts; prevent impunity for gender-based crimes; mainstream gender aspects in peacekeeping operations; increase women's participation in the various phases before, during and after armed conflict), the Action Plan set its overall goal to reduce the impact of conflict on woman and girls and increase women's representation and participation in decision-making. A National Steering Committee – comprised of Ministry of Defense, Ministry of Justice, Ministry of Foreign Affairs and International Cooperation, and Ministry of Finance and Economic Planning – was established to coordinate and monitor the implementation of the Action Plan. The Plan is currently under implementation.

In 2017, the Ministry of Justice developed a Manual on the Investigation and Prosecution of Sexual and Gender-Based Violence (SGBV) Cases in South Sudan. The Manual aims to scale up the country's gender legal framework and to enhance the protection of women and girls against discrimination, forced marriage and gender-based violence. In its efforts to achieve these goals, it describes actions for investigators and prosecutors to support a justice system that is responsive to victims and strives to act as a catalyst for implementation of SBGV related laws and response mechanisms as well as development of legal provisions relating to gender equality and SGBV.

The Ministry of Gender, Child and Social Welfare with the support of the GBV Sub Cluster of South Sudan developed the National Humanitarian Strategy for Prevention and Response to Gender-Based Violence 2019-2021, which provides a common understanding on the priorities, approaches and responsibility of all actors working on GBV issues. Its operational principles are gender equality; centrality of protection; localization; and accountability.

The Standard Operating Procedure (SOP) of Ministry of Gender, Child and Social Welfare (2014) aims to help stakeholders to prevent and respond to GBV. The prioritized response actions of the SOP are, in descending order of priority: medical examination and treatment; early psychosocial counselling to avoid or reduce trauma; police investigation and protection intervention for physical safety; social reintegration where deemed necessary; and access to justice, place of safety/shelter, basic needs, and livelihood/economic support.

The SOP includes the pathways and timelines for reporting and referral of sexual abuse and violence. Referral of survivors has to be through an informed choice by the survivors, and the survivors should be informed of the type of services needed as well as the conditions and availability of the services.

If the survivor is a child, the consent of parents or guardians should be sought where it is in the best interest of the child. Where parents/guardians refuse to pursue the case in the court of law on the child's behalf with clear evidence, the Directorate of Gender and Child Welfare should take up the role and pursue the case to ensure that the child is protected. With regard to child perpetrators (girls or

boys under 18 years of age who have allegedly committed an act of GBV against another person), juvenile justice procedures apply, and child perpetrators should undergo rehabilitation and psychosocial counselling.

With regards to regional and international law, South Sudan has ratified the following:

- African Charter on Human and People's Rights
- The Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment and its Optional Protocol
- The Convention on Elimination of all forms of Discrimination against Women (CEDAW)
- The Convention on the Rights of the Child (CRC)
    - As of 27 October 2018, the Optional Protocol on the Involvement of Children in Armed Conflicts and on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography
- 1949 Geneva Convention and the two Additional Protocols of 1977

World Bank Group Policies and guidance on addressing GBV

• The World Bank Group Gender Strategy FY16–23 provides a framework to expand equal opportunities for women and girls through investments and policy reform and addresses GBV issues.

• The WB Environmental and Social Framework sets out the WB's commitment to sustainable development through a Bank Policy and a set of environmental and social standards that are designed to support borrower's projects with the aim of ending extreme poverty and promoting shared prosperity. Ensuring safety of communities including addressing GBV in the implementation of world bank financed projects is key.

- The WB Good Practice Note (GPN) assists Task Teams in identifying risks of SEA/SH that can emerge in IPF involving major civil works contracts – and to advise Borrowers on how to best manage such risks.

• GM for sexual exploitation and abuse and sexual harassment in World Bank financed projects. This note provides World Bank task teams with information about SEA/SH GMs so they can then effectively advise Borrowers in setting up or adapting grievance mechanisms to cater to the safe and ethical uptake of SEA/SH allegations.

Contextual Risks in South Sudan

Women and girls in South Sudan have for years faced the brunt of violence, abuses, and repressive gender norms. The prevalence of violence against women and girls in South Sudan is among the highest in the world, with up to 65 percent of women and girls report having experienced some form of physical or sexual assault in their lifetime, either by an intimate partner or non-partner. The pervasiveness and scale of GBV in South Sudan is sobering. It is estimated that 50 to 65% of women and girls have experienced physical or sexual violence by an intimate partner or a non-partner in their lifetime compared to Africa's regional estimate of 45.6% (GWI and IRC, 2017) (Elmusharaf, et al., 2019) (WHO et al., 2013).

In addition the economic downturn and loss of livelihoods caused by the conflict forces many women and girls to engage in transactional sex for making a living. Even many female members of the armed groups report physical abuse or rape by fellow group members. The culture of violence and impunity that has emerged from decades of conflict continues to provoke violent behaviours toward women inside and outside their home. Women and girls experiencing violence are less able to engage in formal and informal work and are less able to care for and provide for their families. The violence against women and girls in South Sudan is the result of a complex confluence of multiple risk factors at the community, household, and societal level combined with the stressor of conflict.

South Sudan's diverse ethnic groups and communities are patriarchal with values and ideologies practiced through a social landscape and hierarchy with impacts on marriage; social cohesion between and within communities; the practice of polygamy (one husband, multiple wives); child bearing and rearing; division of labor; decision-making; redress and conflict resolution processes; access to property, land and assets; expectations of engagement in public and private life; and inheritance rights (OXFAM, 2017) (Save the Children, 2017). Masculinity is often expressed through a stoicism despite pain and suffering, strength displayed in hyper-masculine ways and the need to protect. These norms are perpetuated by men *and* women, where women and girls may look down upon men and boys who do not display these characteristics (CARE, 2016).

Decades of crisis and conflict have forced change on the aforementioned social and gendered norms; deepened reliance on certain practices as coping strategies, such as early marriage and further "*transactionalizing"* of marriage; and eroded communal accountability and norms around conflict resolution mechanisms. Health, well-being and protection-oriented outcomes pre-December 2013 were concerning, however the multiple crises facing South Sudan, including armed conflict, economic collapse, famine and public health outbreaks, have exacerbated conditions and quality of life.

SEA/SH RISKS MITIGATION MEASURES, PREVENTION/RESPONSE MECHANISMS AND ACTIONS

Screening for GBV/SEAH Risks in the South Sudan EA-RDIP

Projects such as the South Sudan, EA-RDIP will most likely change power structures and relations (including gender relations) in communities, and place women, girls, and boys in situations where they may be exposed to sexual harassment, exploitation, and abuse. Therefore, it is imperative for the South Sudan EA-RDIP to proactively plan to combat gender-based violence of all kinds that may emerge in host communities as a result of its interventions. Screening for the specific and applicable GBV risks in the South Sudan, EA-RDIP subprojects will be conducted using a screening checklist (see Annex A).

Some of the factors that contribute to vulnerability of women and girls to GBV in the project areas include:

- Power asymmetry. While there is no situation in which there is power symmetry, in rural farming communities in South Sudan, the power asymmetries that exist in the backdrop of poverty and unemployment can be abused easily so that women and girls end up suffering GBV. Clerks that receive tea, coffee, and pyrethrum have a lot if power to decide on the quality of the produce in ways that are life-threatening when they reject it. The clerks often exploit the power asymmetry for personal gain. They therefore engage in SEA. Existing high level of GBV incidences and gender inequalities in South Sudan may be inadvertently reinforced by the implementation of this project.
- Widespread poverty and inequality that invariably leads to desperation and a situation where some women and girls may be vulnerable to SEA during their interaction with project staff who share benefits such as farm inputs or extension services. Average poverty levels are not uniform in the 26 project counties, but there are pockets of extreme poverty in each of the counties which exacerbates vulnerability to GBV.
- Women and girls are at usually high risk of SEA because of societal norms that perpetuate power differentials between males and females, and support or condone males' violence against women and girls. An important additional risk factor is labor influx. Labor influx and the extent to which a community has capacity to absorb labor influx, as well as the inflow of income to workers, can exacerbate already existing inequities between workers and community members (Annex 14: Code of Conduct Form for Contractor's Employees/Workers).
- Low levels of education and literacy among girls, that leads to high unemployment rates among women. These factors weaken women's and girls' confidence as they seek menial jobs in

construction sites. Besides, low confidence means they most at risk of SEA from construction workers who often have higher incomes than usually available to community members.

- Contracting third party project workers e.g construction workers, consultants, service providers that could include international non-governmental organizations (INGO's), local NGO's. This might create a power differential between project workers and project beneficiaries that may subject women to SEA. Some of the forms of SEA committed by project workers against women and girls in the community that could arise from the project include rape and sexual assault, physical and emotional abuse. Sexual harassment may include touching, use of abusive, and demeaning or culturally inappropriate language. Sexual exploitation will likely include transaction sex and other forms of humiliating, degrading or exploitative behavior.
- Potential influx of labor into targeted areas coming from outside the region may trigger social risks to the host community related to sexual abuse and exploitation and sexual harassment (SEA/SH).
- Cumulative and/or more severe impacts faced by IPs and other vulnerable groups such as women-headed households, elderly population, people with disabilities on livelihoods/physical displacement on the potential route of fiber optic network including social exclusion
- South Sudan GBV services (health, police, legal, psychosocial, support and care) provision is not fully accessible in all project locations. This is partly due to third party implementation/service provision for some of the services e.g heath and inaccessibility of these partners to certain project locations due to insecurity and floods.

The subprojects will present a formal work environment that comes with SH risks to local women and girls. Sexual harassment is a risk for any work environment, particularly environments that are stringently hierarchal, give significant and/or undue power to management, and that do not promote and reflect female leadership. Other risk factors for SH include female laborers working alongside male laborers without adequate supervision, without separate washrooms for males and females; and without specific feedback mechanisms for females to share concerns about their working environments, including concerns about sexual harassment.

Prevention and response to project-related risks of SEAH requires concerted and multifaceted efforts bringing together many sectors including Ministries, Departments and Agencies (MDAs) and civil society. The project will coordinate with these actors in creating awareness in the host communities and project staff to reduce any need for response efforts.

The project has been screened for GBV risks using the standard World Bank Tool as shown in Table 1. The main significant risks identified include abuse of trust, power and the exchange of favors carried out by staff, consultants, or workers of contractors or companies associated with or resulting from the project. This risk is likely to occur at the interface between the project with the community, community with the contractors, and so on. This project presents all the foregoing scenarios of SEAH risk sites hence this prevention and response plan. Therefore, the GBV risks are considered high as shown in Table 27.

Table 19 GBV Risk Screening Matrix

	Risk Level	Rating	Notes
1. Prevalence intimate partner violence (IPV)	High	0.5	
2. Prevalence any form of sexual violence (SV)	High	1	
3. Prevalence of child marriage (defined as marriage before exact age 18 reported by women)	High	1	
4. State Department Trafficking in Persons report	High	0.5	2020
5. Is the project in an fragile, conflict or violence-affected (FCV) country?	High	0.5	FY22 List of Fragile and Conflict-affected Situations
6. Laws on sexual harassment	Low	0	WBL 2022
7. Laws on marital rape	High	0.5	WBL 2018
8. Laws on domestic violence	High	0.5	WBL 2022
9. Wife beating justified for at least one specific reason	High	0.5	
10. Prevalence of help seeking to stop violence	High	0.5	
11. National action plan on addressing violence against women and girls/GBV	High	0.5	
12. GBV Working Group	Low	0	https://www.humanitarianresponse.info/en/operations/south-sudan/gender-based-violence; The national GBV sub-cluster in SS is co-coordinated by UNFPA and IRC. Sub-national groups are listed in the most recent available strategy (2017) and therefore this is ranked as lower risk; however as these would need to be in the project area this determination would need to be made by the project team, and current status of any working group should be confirmed. (https://reliefweb.int/sites/reliefweb.int/files/resources/gbv_sub-cluster_strategy_final_1.pdf)
13. Does the country have a National referral pathway protocol for GBV service provision?	Low	0	https://www.unicef.org/southsudan/media/2071/file/UNICEF-South-Sudan-GBV-Briefing-Note-Aug-2019.pdf
14. Is the project in an area of the country with an active humanitarian or emergency situation?	High	2	
15. How much infrastructure, construction, upgrading or rehabilitation does your project entail?	High	1	The construction work involves excavation and installation of fiber optics, access road and other fixed infrastructure.
16. Risk profile of the labor influx	Medium	1	Project workers will include (i) Direct Workers who will be directly engaged by the Borrowers to work on the project; (ii) contracted workers employed by third parties to undertake activities including construction, provide technical inputs and support the TA activities; and (iii) primary supply workers to provide goods or materials needed for the project. At this stage, the use of community workers is not anticipated but this will be confirmed during project preparation appraisal.
17. Were consultations undertaken with women's groups?	High	1	This will be undertaken prior to project implementation.
18. Issues related to GBV and GBV-related concerns about the project have arisen in the community engagement discussions?	Medium	1	
19. Are military or paid security forces being contracted as part of the project?	High	1	Due to the fragility and conflict context in south Sudan, military or paid security forces shall be contracted.
20. Is the project region or province in the lowest poverty quartile of the country?	High	1	
21. Is the project located in hard-to-supervise areas?	High	2	Due to the FCS country context, the project will face challenges on the timely monitoring of the project implementation.
22. Is the project being implemented in rural, peri-urban, or urban areas?	High	1	
23. Is the project construction near school route or other pedestrian access that women and girls use for their daily activities?	High	1	
24. Will the project be able to monitor implementation across the full span (both in terms of geographic spread and duration) of the work?	High	2	
25. Are female workers in close proximity to male workers with limited supervision?	Medium	0.5	
Total Risk Assessment Rating:	High	20.5	

Support Services

These support services may be accessed through the South Sudan, EA-RDIP reference, networking, and coordination with other actors. It is in the interest of the project to identify the services beforehand and link up with them. The support services include amongst others:

- Provision for accessible information on services available to survivors of GBV/SEAH;
- Provision of accessible, effective, and responsive police, prosecutorial, health, social welfare, and other services to redress cases of GBV/SEAH;
- Provision of specialized facilities, including support mechanisms for survivors of GBV/SEAH; and
- Provision of effective rehabilitation and reintegration programs for perpetrators of GBV/SEAH.

There is a network of services established with support from development partners and NGOs that support GBV survivors. The current exact locations of the Centres are as in the table below and any new centres will be updated in the course of project implementation.

Table 20 Current UNFPA One-Stop Centres for GBV survivors

County	Location of OSC	Services Available
Juba	Juba Teaching Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Rumbek	Rumbek State Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Malualkon	Malualkon Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Wau	Wau Teaching Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Bor	Bor State Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Malakal	Asosa PHCC	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Torit	Torit Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Kapoeta	Kapoeta Civil Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Yambio	Yambio State Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Aweil	Aweil Civil Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Akobo	Akobo County Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Kuajok	Kuajok Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal
Bentiu	Bentiu Hospital	Referral, Medical, Non-Food items (dignity kits) Psychosocial support, Security, Legal

The South Sudan EA-RDIP will be responsible through the social safeguards experts and GBV Consultant in disseminating information across the project sites on the OSC for GBV survivors that may be accessible to people around her various subproject sites and routes.

GRIEVANCE REDRESS MECHANISM (GRM)

The detailed GRM for the project including SEA/SH grievances is contained in the SEP. In this section an outline of the GRM is provided. The objectives of the GRM, include preventing and addressing all forms of Gender Based Violence (GBV) including Sexual Harassment (SH) incidents that potentially happen at the workplace and Sexual Exploitation and Abuse (SEA) incidents that potentially happen at community. There will be a dedicated, separate channel within the project GRM for addressing GBV complaints received from members of project affected communities and from workers and making swift referral.

The reporting of a GBV/SEAH incident does not typically follow a uniform pattern due to the importance of maintaining confidentiality as well as the urgency for survivor to seek care and the preservation of evidence. As such, the complainant can use any avenue to report including text

message, email, phone call, written note, or word of mount in person to trusted colleague, member of the GRM committee, GBV Specialist, local NGO.

The project will be required to put in place a GRM with multiple channels to facilitate confidential logging in of GBV/SEAH complaints in all the project locations in line with the GRM in the SEP. It will be necessary to identify and integrate GBV/SEAH entry points within the GM with clear procedures and tools for safe, confidential, and ethical management of related complaints. Considerations related to SH will be integrated into GM explicitly developed for project workers.

With regard to the separate channel within the GRM for addressing GBV/SEA/SH complaints, the only information to be collected from the person reporting will be on:

- demographic data, such as age and gender;
- the nature of the complaint (what the complainant says in her/his own words);
- whether the complainant believes the perpetrator was related to the project; and
- whether they received or were offered referral to services

As part of the overall project, GRM, consultations with affected communities (particularly with women, girls and people living with disabilities) will be done to determine the preferred alternatives to in-person complaints (e.g., phone, online, etc.). The process will emphasize confidentiality and anonymity. This project GM will adapt lessons from other projects to strengthen accountability to communities and identify a range of issues by holding periodic team meetings to discuss any workplace concerns.

The PIU will be guided the by the following GBV/SEAH programming principles:

- Confidentiality: At all stages of the intervention, the privacy and confidentiality of survivors will be assured, prioritizing the well-being of survivors and that the delivery of services and support will not compromise the privacy or identity of individuals involved.
- Respect: Respect of the wishes, dignity and choices of the survivors will be observed at all times and during all stages of any intervention. Survivors will be supported to give their free and informed consent, based on a clear understanding of the facts, implications, risks, and consequences of an action, before information is shared or action is taken.
- Safety and security: Awareness and consideration of any risks or safety concerns that might compromise the physical safety of individuals affected by GBV/SEAH will be sufficiently addressed and factored into any GBV/SEAH intervention or initiative.
- Non-discrimination: All GBV/SEA interventions will be designed to ensure access and the same level of quality of care and assistance for all persons seeking support, or persons affected by GBV/SEA, without regard to sex, sexual orientation, gender identity, age, ethnicity, religion, or other status.

The project GM will implement a survivor-centered approach to managing SEAH complaints. The only information to be collected from the person reporting will be on:

- demographic data, such as age and gender;
- the nature of the complaint (what the complainant says in her/his own words);
- whether the complainant believes the perpetrator was related to the project; and
- Whether they received or were offered referral to services.

The project will put in place the necessary mechanisms to address SEAH. The proposed mitigation measures as per the risk level in the current project is as follows:

- Define GBV requirements and expectations included in the contractual obligations as well as reinforce CoCs that address GBV in the project locations to cultivate an environment free from GBV and SEAH as well as regular dissemination of the CoC to health workers;
- Ensure a GBV specialist is in place to support SEAH risk management measures;
- Develop and deliver information, education, and communication materials for stakeholders to indicate that the project and/area is a GBV/SEAH free zone, as well as provide information on GBV response services (such as hotline numbers and where to seek assistance when needed). Other information to be highlighted include:
    - No sexual or other favors can be requested in exchange for services;
    - Project staff are prohibited from engaging in SEAH and this information should be clearly spelt out during training and other forms of communication to the staff;
    - Any case or suspicion of SEAH should be reported to [hotline number, GM or citizen engagement/feedback mechanism];
    - Information on protection of whistleblowers; and
    - The range of services available for survivors including healthcare, protection and psychosocial care.
- Identify and map GBV service providers to ensure information is made available to health service providers on where psychosocial support and emergency medical services for survivors of GBV can be accessed (within the healthcare system);
- Develop SEAH prevention policy and response procedures that outline key requirements for reporting cases if they arise, measures to enable safe, ethical, survivor-centered response and disciplinary processes;
- Train all project staff and workers (where feasible) and integrate understanding of the CoC, GBV, SEAH as well as accountability and response framework including the referral processes, responsibilities and reporting in other trainings; and
- Utilizing the GRM developed under the project with a separate channel to manage GBV-related complaints to enable reporting in a safe, confidential survivor-centric manner. Cases of GBV/SEAH can be reported through the general Project GRM –through the suggestion box, or through the GRM Hotline Operator, phone calls, emails etc. to be developed). The project GRM will ensure all incidents of GBV/SEAH reported either through the general GRM system that is related to the new project are relayed to the PIU and Bank within 24 hours.
- ***Community engagement*:** To ensure inclusivity of communities and stakeholders, communities will be engaged throughout the project design, implementation, and monitoring. These will be done utilising the community structures identified in the stakeholder engagement plan (SEP). The engagement will not only focus on informing communities on progress of project but will include specific dialogues on SEA/SH, reporting on SEA/SH, safety audits, engaging community on information on available services, reporting and GRM. The project will apply a survivor cantered approach in all its activities to ensure confidentiality. Community dialogues will not directly ask about individual experiences of women and girls related with violence. Further, project will ensure that information is meaningful, timely, and accessible to all affected stakeholders, including usage of different languages, addressing cultural sensitivities, as well as challenges deriving from illiteracy or disabilities. The project will ensure that all process of information disclosure and consultation area inclusive as possible to ensure that all sections of the affected communities will benefit from the project, and women, youth, and other vulnerable groups are not excluded. The project will further ensure that information disclosure takes place in an on-going and satisfactory manner and in a culturally appropriate manner.
- ***Sensitization of Project management and workers*:** Project management and workers will be sensitized on policy and legal provisions on prevention of SEA/SH including roles and responsibilities in addressing SEA/SH, code of conduct, reporting, GRM and available services. These will continuously be done from recruitment stage with updates and refresher sessions on

SEA/SH. This will be done through various communication methods or activities, for example face to face training, online mandatory courses etc.

SEAH PREVENTION AND RESPONSE PLAN

Table 19: SEAH Matrix

	Objectives	Activities / Steps to be taken to Address SEAH risk	Timelines	Responsible	Monitoring (Who will monitor)	Output Indicators	Time period (days)	Estimated Budget (USD)
1	Coordination, Networking and Partnership							
	To develop an integrated and comprehensive plan that will focus on the process of addressing SEAH. Hence the need to form strong alliances with key bodies such as the State and County Governments, the National Governments, and the local community.	• Offer training that will equip the team to handle the rest of the project team with integrity while inculcating various tools that will deal with GBV. • Agree on which stakeholders will constitute the GBV management team. • Develop terms of reference that will guide the GBV management team. • Hold workshops for the GBV management team. • Develop operational guidelines	Quarter 1 for the initial training. Once every quarter. Follow up training which will include sharing of practical experiences.	PIU GBV Consultant	GBV Consultant	• Number of trainings conducted • Number of PIU (Management/leadership) members trained • Focal point identified	10 days	5,700
	The team is responsible in ensuring that SEAH are regular agenda items on PIU meeting as it is a key result area that will determine the success of the project	• Include the items below in the Organized regular PIU meetings: ○ SEAH agenda ○ Reports and updates ○ Follow up actions	Start in quarter one and continuous	PIU	GBV Consultant	• Number of monitoring of project meetings held with SEAH as an agenda item • Percentage of cases/issues/concerns followed up	10 days	5,700
2	Mapping GBV Prevention and Response Service Providers							
	Map communities where the project is implemented for referral services for survivors of GBV, SEAH Undertake social cultural environmental mapping to identify stakeholders for	• Conduct field visits and or remote(desk) review to identify and map the existing services, gap analysis, entry points for survivor assistance, and local actors working on the prevention of and/or response to gender-based violence. • Towards achieving this the following will be undertaken:	Within the first quarter. Mapping must be concluded in each project site before mobilization of workers to site.	GBV consultant	PIU	The Mapping Report	2 days per county for 26 counties	29,500

	Objectives	Activities / Steps to be taken to Address SEAH risk	Timelines	Responsible	Monitoring (Who will monitor)	Output Indicators	Time period (days)	Estimated Budget (USD)
	response mechanism in relation to SEA/H contexts Mapping of Service providers will be undertaken and those mapped will include CBOs, NGOs, and other civil society organizations.	○ Conduct a desk review of GBV service providers in hosting counties and communities. Including the prevention and response mechanism ○ Field visits ○ Stakeholder consultations ● Analyze the services for survivors available in all project locations and assess their quality as per standards, including health care, psychosocial support, police, and legal/justice services						
	Review and update a multi-sectoral GBV referral pathway(s) in line with the National, State, and County systems The survivors will have a place to go and report. Where confidentiality can be done. It will be multi-pronged where for example, women focal points or champions can report to and have access to service providers ensuring witness protection	● Considering the mapped out GBV prevention and response service providers, a referral pathway for service providers will be updated ● Disseminate the referral pathway/list to stakeholders including service providers	Within the first quarter of the kickoff of the work plan To be frequently updated and maintained throughout project implementation.	GBV consultant	PIU	The referral pathway updated The level of dissemination undertaken	3 Days	2,500
3	Capacity Building							
	Capacity building is aimed at strengthening the ability to handle cases of GBV/SEAH	● Provide detailed and comprehensive training on GBV highlighting its causes, consequences and the management and response to SEAH.	Within the first month before the implementation process commences.	GBV consultant and the PIU	PIU	Number of training sessions and staff trained to provide GBV/SEAH related services in the counties.	Continuous	32,600

	Objectives	Activities / Steps to be taken to Address SEAH risk	Timelines	Responsible	Monitoring (Who will monitor)	Output Indicators	Time period (days)	Estimated Budget (USD)
	effectively and efficiently. The goal is to constitute a team and offer them relevant training that will enable them to share knowledge, detect any behavior that might lead to GBV, understand laws surrounding GBV and know the channels of reporting.	● Offer training for community-based organizations, traditional and faith leaders, media, and other stakeholders on innovative approaches for prevention of, and response to GBV. ● Consolidate the teams responsible for effective research, monitoring and evaluation of GBV programs and services to support generation of evidence to inform decisions. ● Review the Contractors and consultants' contracts ● Assess the Human Resource manuals and staff capacity ● Prepare project code of conduct ● Appoint an internal focal point in charge of reporting (who might include one in HR dept)	To be reviewed as need be, for example when a staff exits or when there are notable training needs.					
4	Prevention and Awareness							
	This is aimed at creating an understanding of the magnitude and effects of GBV, SEAH and what can be done to prevent such scenarios during and after the project. The step is aimed at prevention and early detection of any practices that may lead to GBV, SEAH.	● Conduct community awareness sessions on the risk of GBV/SEA/SH and the services available, including the GRM	Within the first quarter To be reviewed throughout the project implementation	GBV consultant	PIU	● Number of community awareness sessions and number of communities trained on the risk of GBV/SEA/SH and the services available, including the GRM.	Continuous county for counties	49,000
5	Response and Support							

	Objectives	Activities / Steps to be taken to Address SEAH risk	Timelines	Responsible	Monitoring (Who will monitor)	Output Indicators	Time period (days)	Estimated Budget (USD)
	The main aim is to strengthen the delivery of effective, accessible, and responsive protection, care, and support services to those affected by gender-based violence. This must involve a high level of confidentiality.	● Identify, map and link with service providers within the project area who can provide quality survivor centred services and manage GBV risks (for effective referrals) ● Make provisions for various social facilities such as health, justice, legal and psychosocial support services for an effective, efficient, and human rights-based approach to GBV mitigation ● Provide dedicated and responsive needs-driven services to survivors of GBV there is need for special services such as emergency transport facilities. ● Build community-based safe shelters with the right personnel and outreach services for the protection of survivors of GBV. ●	Across the project life cycle	GBV consultant Legal practitioner Human right activists Counselors	GBV consultant	A community that is well informed and are ready to protect women Strengthened Partnerships for consultations, referrals and capacity building support with GBV service A well-structured legal body specifically dealing with GBV issues in place Operational code of conduct being adhered to. Women and girls who are aware of their rights Women are educated and placed in positions where they can benefit from the value addition programs	continuous	81,500
6	Grievance Management (GM) for GBV Responsive Reporting							
	The purpose for GM is to sensitize the community on the channels available for reporting any cases of sexual harassment or sexual exploitation and abuse.	● Review and amend the existing GM to ensure it meets the GBV needs that currently exist. This should create a conducive environment that is safe for the victims to report, receive services (medical, psychosocial or legal) and take shelter. ● Guide the community and employees on the multiple channels of reporting cases of GBV and what constitutes sexual harassment as per the guidelines. ● Outline for the employees the penalties and disciplinary actions that will be	Ongoing throughout the project implementation	GBV Consultants	GBV consultants	When victims of sexual harassment can easily reach out to report an attempt of action of violence against them and receive a supportive response immediately.	Continuous	65,200

	Objectives	Activities / Steps to be taken to Address SEAH risk	Timelines	Responsible	Monitoring (Who will monitor)	Output Indicators	Time period (days)	Estimated Budget (USD)
		taken against anyone that breaches the code of conduct.						
7	Monitoring and Evaluation							
	Monitoring is aimed at developing a set of key quantitative and qualitative indicators to manage measure and monitor the progress and effectiveness of the integrated effort to deal with GBV. It measures how well the policies are being adhered to, any issues that might emerge in regard to GBV and recommendation to improve any situation that may arise.	• Develop instruments meant to measure the magnitude of reported cases of GBV categorized in their various forms, such as child sexual abuse • Mechanism to measure effectiveness of the various support systems	Takes place throughout the project life	PCU	GBV consultant	How effective is the support and interventions offered to victims of GBV?	Continuous	65,200
		TOTAL						336,900

ANNEX 9 CHANCE FIND PROCEDURES

This procedure was developed in accordance with the mandate of the Ministry of Youth, Culture and Sports (Directorate of Archives and Antiquities) of protecting and preserving both tangible and intangible cultural heritage records of South Sudan and the requirements of the World Bank's ESS 8 (To protect cultural heritage from the impacts of project activities and support its preservation, to address cultural heritage as an integral aspect of sustainable development, to promote meaningful consultation with stakeholders regarding cultural heritage and to promote the equitable sharing of benefits from the cultural heritage).

This procedure is included as a standard provision in the implementation of Public Works contracts to ensure the protection of cultural heritage (Archaeological and Historical Sites). PIU, as well as contractors will be required to observe this procedure as documented hereafter.

Subprojects that require excavation or construction in sites of known archaeological will not be allowed, including sites were project would require FPIC due to impacts on cultural heritage. Where historical remains, antiquity or any other object of cultural or archaeological importance are unexpectedly discovered during construction in an area not previously known for its archaeological interest, the following procedures should be applied:

- Stop construction activities;
- Delineate the discovered site area;
- Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a full-time guard should be present until the responsible authority takes over;
- Notify the responsible foreman/archaeologist, who in turn should notify the responsible authorities, the concerned officers from the Directorate of Archives and Antiquities and local authorities (within less than 24 hours);
- Responsible authorities are in charge of protecting and preserving the site before deciding on the proper procedures to be carried out;
- An evaluation of the finding will be performed by the concerned officers from the Ministry of Youth, Culture & Sports in the Directorate of Archives and Antiquities. The significance and importance of the findings will be assessed according to various criteria relevant to cultural heritage including aesthetic, historic, scientific or research, social and economic values;
- Decision on how to handle the finding will be reached based on the above assessment and could include changes in the project layout (in case of finding an irrevocable remain of cultural or archaeological importance), conservation, preservation, restoration or salvage;
- Implementation of the authority decision concerning the management of the finding;
- Construction work can resume only when permission is given from the concerned officers from the Ministry of Youth, Culture & Sports after the decision concerning the safeguard of the heritage is fully executed;
- In case of delay incurred in direct relation to archaeological findings not stipulated in the contract (and affecting the overall schedule of works), the contractor may apply for an extension of time. However, the contractor will not be entitled for any kind of compensation or claim other than what is directly related to the execution of the archaeological findings works and protections.

ANNEX 10: QUARTERLY E&S REPORT FORMAT

This annex provides a sample quarterly E&S Reporting Format. However, since the project includes a wide variety of thematic activities, the PIU can provide specific E&S Quarterly Reporting Templates, which are tailored to the type of activities of each IP or contractor.

Summary of Key E&S Aspects during the Reporting Period

Project Status, E&S Incidents, E&S Changes, E&S Initiatives

Provide a brief description of any new developments in relation to construction and operations and facilities over the reporting period.

E&S Incidents

Please provide a summary of all the notifiable E&S incidents or accidents

Date	Incident description	Class	Reports sent to lenders	Corrective actions / Remedial plan

E&S Changes

Please provide a summary of all the notifiable E&S changes.

Date	Change description	Reports sent to lenders	Implementation status

Improvements/initiatives regarding E&S performance

Briefly describe improvements/initiatives implemented during the reporting period on management of E&S aspects (e.g. energy/water savings, sustainability reports, waste minimization, etc.)

ESS1: Assessment and Management of Environmental and Social Risks and Impacts

E&S Impact / Risk Assessment

Have any supplemental environmental, social, health and safety impact/risk assessments been conducted during the reporting period? (Please provide copies)

Compliance with Environmental and Social Management Plans

The status of the ESMP implementation should be described and any issues that remain outstanding should be detailed.

ESS2. Labor and Working Conditions

Human Resources Management

Have implementers and contractors changed/updated their Human Resource (HR) policy and procedures, HR manual, and Health & Safety procedures, during the reporting period?

☐ Yes

☐No

If yes, please provide details.

	# community workers	# direct workers	# Female direct workers	Turnover	# Contracted workers[49]
Previous year					
Reporting year					

Provide the following information regarding the workforce:

List the worker-related grievnces or court cases and describe their status.

Occupational Health and Safety

Describe the main changes implemented in terms of Occupational Health and Safety (OHS) during the reporting period, e.g. revision of the OHS management procedures, action plans for technical improvements, leading/lagging indicators used/introduced, identification of hazards, new controls, etc.

Please attach Health & Safety audit reports available for the reporting period.

☐ Copies attached with this report

☐ Copies available upon request

☐Not Available

Accident Statistics Monitoring

Report TOTAL numbers for each parameter	This reporting period			Last reporting period (not cumulative)[50]		
	Community workers	Direct workers	Contracted workers	Community workers	Direct workers	Contracted workers
Total number of workers						
Total man-hours						

[49] See ESS2 definitions.

[50] To be provided after the project has been operational for at least two consecutive years.

worked - annual						
Total number of lost time occupational injuries[51]						
Total number of lost workdays[52] due to injuries						
Lost time injury frequency [53]						
Fatalities						
Vehicle collisions[54]						

Provide details for the non-fatal lost time injuries during this reporting period.

Implementing Partner/contractor/ Subcontractor employees?	Total workdays lost	Description of injury	Cause of accident	Corrective measures to prevent reoccurrence

Provide details for fatal accidents during this reporting period, if any, (and provide copies of accident investigation and respective corrective plan).

Date of Accident	Type of Accident	Description of Accident	# of Fatalities	Preventive measures taken after the incident

OHS Training

Describe Health and Safety training programs carried out in the reporting period.

[51] *A lost-time injury* (LTIs) is the incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.

[52] *Lost workdays* are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

[53] The number of *lost time injuries* (LTIs) recorded for Project workers per million man-hours worked by them. LTI Frequency Rate = injuries per million hours worked = # of lost time accidents x 1,000,000 hours / total man-hours worked).

[54] Vehicle Collision: When a vehicle (device used to transport people or things) collides (comes together with violent force) with another vehicle or inanimate or animate object(s) and results in injury (other than the need for First Aid) or death.

Workplace Monitoring
Please provide copy of any Workplace Monitoring reports developed for the reporting period.

ESS3. Resource Efficiency and Pollution Prevention

Environmental Monitoring

Provide copy of environmental monitoring data reports for this reporting period, collected consistent with the ESMPs for the sub-projects.

Briefly describe environmental mitigation measures implemented during the reporting period to comply with E&S requirements.

Resources Efficiency: Energy and Water

Provide data on energy and water consumption during the reporting period. If the data requested are available in another format, they can be submitted instead.

Describe the resources efficiency measures/efforts being implemented to minimize fuel, energy, and water consumption.

Hazardous and non-Hazardous Waste[55]

Erosion Control, Slope Stability and Reinstatement
Please describe status and actions implemented in terms of erosion control, slope stability, and reinstatement within the project's footprint and area of influence.

ESS4 Community Health, Safety and Security

Community Health and Safety

Please list and describe any initiatives implemented in relation to community health and safety during the reporting period.

Please provide the list and description of the actions, the expected or actual dates of implementation, progress/status, results obtained. You can use a tabular format (as below) or provide the information as an attachment of the report.

Accident Reporting

Provide details for the non-fatal casualties, involving third parties, during this reporting period.

Date of Accident	Type of Accident	Description of Accident	# of People Injured	Preventive measures taken after the incident

[55] Waste types include but are not limited to: chemical containers, chemical sludge, containers/pallets, dewatered sludge, domestic waste, ferrous and non-ferrous scrap, hospital waste, laboratory waste, liquids, off-specification raw materials, paint waste, sludge, solids, truck and auto tires, waste fuel hydrocarbons, waste hydraulic fluids, waste lubricating hydrocarbons, waste solvents, waste treatment sludge, contaminated soil, creosote sleepers, etc.

Provide details for fatal accidents during this reporting period (and provide copies of accident investigation and respective corrective plan).

Date of Accident	Type of Accident	Description of Accident	# of Fatalities	Preventive measures taken after the incident

SEA/SH Action Plan

Please provide an update on the status and progress of the actions as defined in the SEA/SH Action Plan. You may attach relevant monitoring reports.

ESS5 Land Acquisition and Involuntary Resettlement

Report any activities that have been required involuntary resettlement.

List any RAP preparation and report on their implementation status.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Biodiversity Management

Please report on the mitigation measures included in the ESMF and ESMPs

As needed, using the table below describe any **new activities or expansions** that have increased the project footprint into new **areas of habitat** during the reporting period.

New activity/expansion	Total area covered	Habitat type

ESS8 Cultural Heritage

Report if chance find procedures have been applied if not, please indicate Not Relevant.

ESS 10 Stakeholder Engagement and Information Disclosure

Stakeholder Engagement, Public Consultation and Disclosure

List any stakeholder engagement events, including public hearing, consultation and disclosure, liaison with non-governmental organizations, civil society, local communities on E&S.

Date	Participant(s)	Formats of Interaction	Issues Discussed	Response/ Agreement reached (attach minutes if any)	Actions Taken (if any)/ Remarks

Grievance Mechanism and Court Cases

Report the number and type of requests and/or grievances received from project affected people / local communities / local organizations.

How many have been resolved and how many are pending? (Please attach a log of the grievance redress registry.

Report the number and type of court cases on E&S grounds, if any (Please attach a log of all court cases and their status)

ANNEX 11: CODE OF CONDUCT FORM FOR CONTRACTOR'S EMPLOYEES/WORKERS

1. Introduction

The Code of Conduct consists of two sections: Core Values, and Compliance Program and Guidelines. Our Core Values are part of our heritage and are fundamental to who we are as an organization. These Core Values are the basis for our decision-making. The Compliance Program and Guidelines address some specific areas of concern, either due to the Company emphasis or legal requirements. This code of conduct outline below therefore meets the legal and contract requirements for the proposed project of the **********.

2. Core Values

The following nine Core Values represent the foundation of our Code of Conduct. Although achieving these high standards may be difficult, we nonetheless aspire to uphold them as we live our lives and conduct our business:

Core Values represent who we are and provide, without question, the standard of behavior by which we conduct business, how we treat one another, how we deal with our customers, how we respond to our stakeholders, and how we hold one another and ourselves accountable.

Safety

- The safety of our employees, our stakeholders, and the general public is our responsibility.
- Plan safety into every aspect of our work and relentlessly execute our plan.
- Drive for continuous improvement to create and sustain a zero-incident culture

Honesty

- Be truthful, accurate, and straightforward.
- Be candid and non-deceptive in communication and conduct.

Integrity

- Maintain consistency between our beliefs and our behavior–walk our talk!
- Have the courage to contend boldly for the right and reject firmly that which is wrong.

Fairness

- Endeavor to be reasonable, open-minded, impartial, even-handed, and non-discriminatory in all our dealings.
- Genuinely partner and actively collaborate within and outside the Company.
- Maintain, without deviation, an attitude of sincerity, tolerance, consideration, and assistance toward others, regardless of position.

Accountability

- Accept responsibility for our own actions or inactions and for those whom we supervise.
- Take prompt, constructive steps to correct mistake and defects.
- Promote teamwork by holding one another accountable–of rejecting behaviors inconsistent with this Code of Conduct.

Consideration of Others

- Practice the principles of the Golden Rule.
- Respect the dignity, rights, safety, and personal

Property of others.

- Be open to the ideas and the opinions of others.
- Exercise patience and remain positive under all circumstances.
- Ensure that those whom you supervise are not put in compromising situations.

Pursuit of Excellence

- Consistently apply diligence, perseverance, attention to detail, and good work habits to ensure high-quality projects, and products and excellent customer service.
- Build capabilities through continuous learning, coaching, mentoring, and teaching.
- Never accept complacency or indifference.
- Remain flexible and open to possibilities.

  Reliability
- Only make realistic commitments and follow through on the commitments you make.
- Be prompt and responsive in business dealings within and outside the Company.

  Citizenship
- Comply with all governmental laws, rules, and regulations.
- Show consideration for the safety and the welfare of everyone, including our natural environment.
- Respond to the impact our work has on the natural by consistently evaluating and improving our efforts so that our projects and processes work in harmony with the environment.
- Cultivate an organization that actively encourages us to be the best of who we are and continuously strive to make a difference in our communities and the world.

3. Equal Employment Opportunity and Other Employment Laws

- Employees will comply with all, state, and local equal employment opportunity laws.
- The Company will employ persons and make employment-related decisions without regard to an individual's race, color, religion, sex, age, creed, ancestry, marital status, sexual orientation, gender identity, disability, medical condition, genetic information, or any other characteristic protected by law.
- The Company is committed to compliance with the Kenya's persons with disabilities PWDs Act and will make reasonable accommodations for qualified individuals with known disabilities. This policy governs all aspects of employment, including selection, job assignment, compensation, discipline, termination, and access to benefits and training.
- It is the Company's responsibility to provide all employees with a workplace free of harassment, intimidation, coercion, and retaliation.

4. Gender Based Violence, Sexual Harassment, and Child Abuse/Exploitation Code of Conduct

Contractor employees, officers, and directors are responsible for conducting themselves so that their actions are not considered sexually harassing, demeaning, or intimidating in any way. They are obliged to create and maintain an environment which prevents gender based violence (GBV) and child abuse/exploitation (CAE) issues, and where the unacceptability of GBV and actions against children are clearly communicated to all those engaged on the project, as called for in the Company's Gender based Violence and Sexual Harassment code of conduct. Under the Kenyan law (Sexual Offences Act 2006), sexual harassment is generally defined as either:

1. Unwelcome sex-based conduct that is so severe and pervasive that it creates an intimidating, hostile, or offensive work environment

   OR
2. Sex-based conduct by a supervisor or manager that tangibly affects an employee's job–for example, imposition of discipline, or loss of pay or benefits.

   Sexual harassment can occur in a variety of forms. It may include:

(i) Unwelcome sexual advances;

(ii) Requests for sexual favors;

AND/OR

1. Verbal remarks or physical contact or conduct of an intimate or sexual nature, such as uninvited touching or sexually suggestive comments, that interfere with another person's work performance or that create an intimidating, hostile, or offensive working environment.
2. The Company has zero tolerance for discrimination or harassment of any kind, and employees will be subject to disciplinary action, including termination, for violations.
3. The Company will not tolerate retaliation against anyone who in good faith raises a concern or reports a violation.

5. Procedures

5.1. Getting Help

All directors, officers, and employees have a responsibility to read, understand, and follow our Code of Conduct. Remember, this is only the starting point. Our Code does not attempt to address every situation you might encounter in your job.

So where do you turn for help?

Your first resource is your immediate supervisor to answer your questions or contact a Company resource who can. But, if you feel your situation would make it impossible or uncomfortable to approach your immediate supervisor, you should go to your next level of management, the site Supervisor, or Company's Human Resources manager.

5.2 Discipline

All employees are expected to read, understand, and comply with our Code of Conduct. Violations of law, this Code, and other Company policies and procedures can lead to disciplinary action up to and including termination. Supervisors, managers, and officers can also be subject to discipline if they condone, permit, or have knowledge of illegal, unethical, or other improper conduct and do not take appropriate action.

The Company will not tolerate retaliation against anyone who, in good faith, uses the reports or raises questions regarding potentially illegal, unethical, or improper conduct.

6. Implementation of the Code of Conduct

The implementation of a code of conduct will involve communication of policies and guidelines to all staff and workers, by providing any necessary training to ensure they understand the code. The code will be practiced and promoted by management to lead the way for staff and workers.

The code of conduct will be one of the conditions of employment. A staff or a worker shall be required to sign and commit himself or herself to comply with the code.

7.1. Method of delivering the code

(a) Induction package

Induction training is a chance for existing employees/workers and new employees to review and understand expectations and requirements. The contractor through her representatives and or health and safety team shall perform induction training to all workers. This will happen when the work starts and when any new employee or a worker comes to work on site. Along with a code of conduct, the induction package may include a training and information on applicable work Environment health and safety ,or any other information that the contractor wish to deliver to new employees or workers.

(b) One-on-one training

A Company representative - such as the Foreman, Headman, site supervisor, HR staff member or trainer - could work through the code of conduct and other requirements and expectations with

existing employees or workers during the site meetings which include morning toolbox talks before start of work

(c) Employee handbook

A printed version of Company's employee handbook that will be left in a communal area such as a site office room will provide staff or workers easy access to the code of conduct when required.

(d) Notice boards

A summary version of the full code of conduct can act as a reminder to staff. Different parts of the code can be highlighted in different parts of the site office - for example, signs can be erected in the store about cleanliness, safe access of materials and respect for others.

8. Monitoring the implementation of the Code

(a) Understanding the code

Feedback will be sought from the employees/workers to ensure that they understand the code of conduct and what is expected of them. If they don't fully understand some areas, appropriate training will be provided. For example:

-Physically showing them designated smoking areas

-Verbally give an example of how of how to handle or talk to one another

-Practically show them how to carry out safety procedures, work procedures and or use of Personal protective equipment etc.

(b) Reviewing staff and workers understanding of the code

Review of staff and workers understanding of Company's Code of Conduct by requiring them to complete a survey or questionnaire will be done. The questions will focus on any new sections and particular areas of the code that workers may not fully understand.

The surveys will identify areas of the code that staff may need further training or may be unclear and need to be reviewed. Follow up on the survey to ensure that all staff understand what is expected of them. When they are happy with the new code, they will then sign a document to say that they accept to comply.

9. Breaches of the Code of Conduct.

To minimize conflict if any employee or laborer violates the code, each of them will be asked to sign a document to say that they agree to abide by the code of conduct. This will form grounds to take a disciplinary action. In case of violations:

Code of conduct or safety violation notice(s) shall be issued to any employee, subcontractor, or anyone on the jobsite violating the provisions of the Code, the safety rules or regulations by Responsible Person.

(i) Any violation of this Code or safety rules can result in suspension or immediate termination.

(ii) Any employee receiving three (3) written general violations within a six (6) month period shall be terminated.

(iii) Issuance of a safety violation notice for failure to use fall protection, appropriate PPE provided, or for failure to report a job injury (at the time of the injury) may result in immediate termination, in accordance with health and safety company policy.

10.0 Code of Conduct Certification

As the Contractor's employee and as applicable to my work responsibilities:

(i). I will deal fairly and ethically with my employer and on behalf in all matters and will at all times Proactively promote ethical behavior.

(ii) I will not (a) take for myself personally any opportunities that are discovered through the use of the Contractor's property, information, or position; (b) use the Contractor's property, information, or position for personal gain

(iii) I will protect Contractors's assets and promote their efficient and legitimate business use.

(iv) Without exception, I will comply with all applicable laws, rules, and regulations provided

(v) I will promptly report any illegal or unethical conduct to Contractors's management or other appropriate authorities.

I have read the Contractor's Code of Conduct and do certify that:

- I understand the Contractor's Code of Conduct.
- I understand that I have a responsibility to ask questions, seek guidance, and report suspected violations of the Code.
- To the best of my knowledge, I am in compliance with the Contractors Code of Conduct.
- I understand that the Company reserves the right to change, rescind, and add to the Contractors Code of Conduct at its sole and absolute discretion and may do so at any time in writing or otherwise.

Employee Signature ……Date……

Name……..

Job Location/Specification/Designation……

Witness signature……

Witness Name……

11. Declaration by the Managing Director

I _____ hereby certify that the above code of conduct represents who we are as a Company. I shall ensure that the practical and professional conduct of our employees and staff are in line with the provisions of this Code of Conduct and that each of them shall be required to individually sign it and ensure compliance. I confirm as a Managing Director that I shall remain in good standing and respect of this Code of Conduct.

Signed by: _____

Title: Managing Director.
Contractors Ltd.

Date: _____

Annex A. Company Gender Based Violence and Child Abuse/Exploitation Code of Conduct

Contractors employees are obliged to create and maintain an environment which prevents gender based violence (GBV) and child abuse/exploitation (CAE) issues, and where the unacceptability of GBV and actions against children are clearly communicated to all those engaged on the project. In order to prevent GBV and CAE, the following core principles and minimum standards of behavior will apply to all employees without exception:

1. GBV or CAE constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. All forms of GBV and CAE including grooming are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit GBV, or CAE will be pursued.
2.Treat women and children (persons under the age of 18) with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
3. Do not use language or behavior towards women or children that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
4. Sexual activity with children under 18—including through digital media—is prohibited. Mistaken belief regarding the age of a child and consent from the child is not a defense.
5. Exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading or exploitative behavior is prohibited.
6.Sexual interactions between contractor's and consultant's employees at any level and member of the communities surrounding the workplaces that are not agreed to with full consent by all parties involved in the sexual act are prohibited. This includes relationships involving the withholding, promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex – such sexual activity is considered "non-consensual" within the scope of this Code.
7. Where an employee develops concerns or suspicions regarding acts of GBV or CAE by a fellow worker, whether in the same contracting firm or not, he or she must report such concerns in accordance with Standard Reporting Procedures.
8. All employees are required to attend an induction training course prior to commencing work on site to ensure they are familiar with the GBV and CAE Code of Conduct.
9. All employees must attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the institutional GBV and CAE Code of Conduct.
10. All employees will be required to sign an individual Code of Conduct confirming their agreement to support GBV and CAE activities.

I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and CAE. I understand that any action inconsistent with this Code of Conduct or failure to act as mandated by this Code of Conduct may result in disciplinary action.

FOR THE COMPANY

Signed by: _____

Title: Managing Director Date: 13th October 2017

Annex B. Manager's Gender Based Violence and Child Protection Code of Conduct

Managers at all levels play an important role in creating and maintaining an environment which prevents GBV and prevents CAE. They need to support and promote the implementation of the Company and Individual Codes of Conduct. To that end, they must adhere to the Manager's Codes of Conduct. This commits them to support and developing systems which maintain a GBV-free and child safe work environment. These responsibilities include but are not limited to:

Mobilization

1. Establish a GBV and CAE Compliance Team (GCCT) from the contractor's and consultant's staff to write an Action Plan that will implement the GBV and CAE Codes of Conduct.
2. The Action Plan shall, as a minimum, include the
 a. Standard Reporting Procedure to report GBV and CAE issues through the project Grievance Mechanism (GM);
b. Accountability Measures which will be taken against perpetrators; and,
c. Response Protocol applicable to GBV survivors/survivors and perpetrators.
3. Coordinate and monitor the development of the Action Plan and submit for review before mobilization
4. Update the Action Plan to reflect feedback and ensure the Action Plan is carried out in its entirety.
5. Provide appropriate resources and training opportunities for capacity building so members of the GCCT feel confident in performing their duties. Participation in the GCCT will be recognized in employee's scope of work and performance evaluations.
6. Ensure that contractor, consultant, and client staff are familiar with the proposed project GM and that they can use it to anonymously report concerns over GBV and CAE.
7. Hold quarterly update meetings with the GCCT to discuss ways to strengthen resources and GBV and CAE support for employees and community members.

Training

1. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and CAE Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the Action Plan for addressing GBV and CAE issues.
2. Provide time during work hours to ensure that direct reports attend the mandatory project facilitated induction GBV and CAE training required of all employees prior to commencing work on site.
3. Ensure that direct reports attend the monthly mandatory training course required of all employees to combat increased risk of GBV and CAE during civil works.
4. Managers are required to attend and assist with the facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations.
5. Collect satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.

Prevention

1. All managers and employees shall receive a clear written statement of the company's requirements with regards to preventing GBV and CAE in addition to the training.
2. Managers must verbally and in writing explain the company and individual codes of conduct to all direct reports.

3. All managers and employees are to sign the individual 'Code of Conduct for GBV and CAE', including acknowledgment that they have read and agree with the code of conduct.
4. To ensure maximum effectiveness of the Codes of Conduct, managers are required to prominently display the Company and Individual Codes of Conduct in clear view in public areas of the workspace. Examples of areas include site office, rest, and lobby areas of sites.
5. All posted and distributed copies of the Company and Individual Codes of Conduct should be translated into the appropriate language of use in the work site areas (e.g., Kiswahili).
6. Managers will encourage employees to notify the GM of any acts of threats or violence to women or children they have witnessed or received or have been told that another person has witnessed or received, or any breaches of this code of conduct.
7. Managers should also promote internal sensitization initiatives (e.g., workshops, campaigns, on-site demonstrations etc.) throughout the entire duration of their appointment
8. Managers must provide support and resources to the GCCT to create and disseminate the internal sensitization initiatives through the Awareness-raising strategy under the Action Plan.

Response
1. Managers will be required to provide input, final decisions and sign off on the Standard Reporting Procedures and Response Protocol developed by the GCCT as part of the Action Plan.
2. Once signed off, managers will uphold the Accountability Measures set forth in the Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV and CAE (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).
3. If a manager develops concerns or suspicions regarding any form of GBV or CAE by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he shall immediately refer the case to the competent authorities (Police) and, at the same time, report the case to the GM and the GCCT for internal processing according to the established reporting and accountability measures. Always respecting the survivor's choices if a survivor has been identified.
4. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision was made.
5. Managers failing to comply with such provision can be in turn subject to disciplinary measures, to be determined and enacted by the company's CEO, Managing Director, or equivalent highest-ranking manager. Those measures may include:
a. Informal warning
b. Formal warning
c. Additional Training
d. Loss of up to one week's salary.
e. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.

Termination of employment.
6. Ultimately, failure to effectively respond to GBV and CAE cases on the work site by the contractor's managers or CEO may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and CAE. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action.

FOR THE EMPLOYER

Signed by: _____

Title: Managing Director

Date: _____

Individual Gender Based Violence and Child Protection Code of Conduct.

I, _____, acknowledge that preventing gender based violence (GBV) and child abuse/exploitation (CAE) are important. GBV or CAE activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or even termination of employment. All forms of GBV or CAE are unacceptable be it on the work site, the work site surroundings, or at workers camps. Prosecution of those who commit GBV, or CAE will be pursued as appropriate.

I agree that while working on the proposed project, I will:

- Consent to police background check.
- Treat women and children (persons under the age of 18) with respect regardless of race, color, language, religion, political or other opinion, national, ethnic, or social origin, property, disability, birth or other status.
- Not use language or behavior towards women or children that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual activity with children—including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defense.
- Not exchange money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading or exploitative behavior.
- Not have sexual interactions with members of the communities surrounding the workplace and worker's camps that are not agreed to with full consent by all parties involved in the sexual act. This includes relationships involving the withholding, promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
- Attend training courses related to HIV/AIDS, GBV and CAE as requested by my employer.
- Report to the 'GBV and CAE Compliance Team' any situation where I may have concerns or suspicions regarding acts of GBV or against children by a fellow worker, whether in my company or not, or any breaches of this code of conduct.

Regarding children under the age of 18:

- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children into my home unless they are at immediate risk of injury or in physical danger.
- Not sleep close to unsupervised children unless necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible.
- Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium
- Refrain from physical punishment or discipline of children).
- Refrain from hiring children for domestic or other labor, which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
- Comply with all relevant local legislation, including labor laws in relation to child labor.

Use of children's images for work related purposes

When photographing or filming a child for work related purposes, I must:

- Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
- Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
- Ensure photographs, films, videos, and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
- Ensure images are honest representations of the context and the facts.
- Ensure file labels do not reveal identifying information about a child when sending images electronically.

I understand that the onus is on me to use common sense and avoid actions or behaviors that could be construed as GBV or CAE or breach this code of conduct.

I acknowledge that I have read and understand this Code of Conduct and have been explained the implications regarding sanctions ongoing employment should I not comply.

Signed by _____

Title: _____

Date: _____

Employer's Child Protection Code of Conduct

To Be Signed by All Employees, Sub-contractors, Sub-consultants, and Any Personnel thereof

I…… agree that during my association with Contractors, I have been sensitized and in accordance with the Employer's Child Rights Protection Policy and/or National law on Child Protection, I must/ shall:

- Treat children with respect regardless of age, race, color, gender, language, religion, political or other opinion, national, ethnic, or social origin, property, disability, relationship, birth, or other status;
- Not inappropriately touch or use language or behavior towards children that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate;
- Not engage children under the age of 18 in any form of sexual intercourse or sexual activity, including encouraging or paying for sexual services or acts;
- Wherever possible, ensure that another adult is present when working in the proximity of children;
- Not invite unaccompanied children into my place of residence or any other secluded place, unless they are at immediate risk of injury or in physical danger;
- Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible;
- Use any computers, mobile phones, video cameras, cameras, or social media appropriately, and never to exploit or harass children or access child exploitation material through any medium;
- Not use physical punishment on children;
- Not hire children for domestic or other labor, which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury or moral decadence;
- Comply with all relevant local and applicable international legislation, including national child protection laws and labor laws in relation to child labor;
- Immediately report concerns or allegations of child exploitation and abuse and policy non-compliance in accordance with appropriate procedures;
- Immediately disclose all charges, convictions, and other outcomes of an offence, which occurred before or occurs during my association with the Employer that relate to child exploitation and abuse.
- When photographing or filming a child or using children's images for work-related purposes, I must:
- Assess and endeavor to comply with local traditions or restrictions for reproducing personal images before photographing or filming a child;
- Obtain informed consent from the child and parent or guardian of the child before photographing or filming a child. As part of this I
- must explain how the photograph or film will be used;
- Ensure photographs, films, videos, and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive;
- Ensure images are honest representations of the context and the facts;
- Ensure file labels, meta data or text descriptions do not reveal identifying information about a child when sending images electronically or publishing images in any form;
- I understand that the onus is on me, as a person associated with the Employer, to use common sense and avoid actions or behaviors that could be construed as child exploitation and abuses

Signed: ·

Employee's Name Employee's Designation

Date:

Witness:
Signed: ·

Employer's Representative's Name Representative's Designation

Date and stamp:

Annex 12: LIST OF CONSULTED PEOPLE/INSTITUTIONS

The below stakeholders were consulted during the World Bank mission to South Sudan from 21-25 February 2022.

Table 8 Stakeholders consulted during mission in February 2022

DE4A Technical Committee

	Name	Affiliation
1	Dr. Lado Wani Kenyi, Undersecretary	MICT&PS
2	Napoleon Adok, Director General	NCA
3	Papiti Okwaci, CEO	South Sudan International Gateway (SSIG)
4	Thomas Gatkuoth, Director General of Telecommunications	MICT&PS
5	Branya Jibi, Director of IT	MICT&PS
6	Chol Mayen, Director of Technical Services	NCA

Key Stakeholders Consulted

S No.	Session	Affiliation/Entity Represented
1	**DE4A Kick-off/ Orientation**	DE4A Committee – Government of the Republic of South Sudan (GRSS) including MICT&PS, NCA, SSIG
2	**Understanding ICT structure, priorities, and plans**	DE4A Committee – Government of the Republic of South Sudan (GRSS) including MICT&PS, NCA, SSIG
3	**Regional integration; Horn of Africa Initiative**	DE4A Committee – Government of the Republic of South Sudan (GRSS) including MICT&PS, NCA, SSIG
4	**Donor Partners and Multilateral efforts**	1. United Nations Development Programme (UNDP) 2. UNESCO 3. UN Women 4. GIZ 5. JICA 6. South Sudan Internet Governance Forum 7. African Development Bank
5	**South Sudanese Business Associations/Ministries/Authorities**	1. South Sudan Chamber of Commerce, Industry, and Agriculture 2. Ministry of Trade and Industry
6	**Universities and Educational Centres**	1. University of Juba 2. Kampala University
7	**Telecom Providers**	1. MTN 2. ZAIN 3. Digitel
8	**Insurance Providers**	1. UAP 2. Britam 3. Baping
9	**Accelerators, Incubators, start-ups, early-stage tech businesses, and digital training providers**	1. Dynamic Consult 2. Komax Consult 3. Komakech Denis Don 4. Koneta Hub 5. JICTS 6. Foundation for Youth Initiative (FYI)

		5. ATXNET Ltd
25	**Foreign Exchange, taxation and accounts**	1. Bank of South Sudan **2.** National Revenue Authority

10	**Public Commercial Banks**	1. Alpha Bank 2. Cooperative Bank South Sudan
11	**ISP**	1. Liquid Intelligent Technologies 2. Muya 3. RCS – Radio & Satellite Communication Limited 4. Eden Technologies Ltd 5. IPTEC Limited
12	**Digital Public Platforms**	1. Ministry of Public Service and HRD 2. Ministry of Labour
13	**Private Commercial Bank**	1. Kush Bank 2. Ecobank South Sudan 3. Kenya Commercial Bank
14	**ISP**	1. Horizon IT Solutions Limited 2. DishNet Africa Limited 3. Fast Network Limited 4. Supernet Limited 5. 4G Telecom Limited
15	**Education Sector overview**	1. Ministry of General Education and Instruction
16	**Fintech Players and Digital Businesses**	1. Trinity Technologies 2. Linkspay 3. South Sudan Women Finance 4. Vision Capital
17	**Telecomm Regulator and Implementing Authorities**	1. National Community Authority (NCA) 2. Universal Service and Access Fund (USAF) 3. South Sudan International Gateway (SSIGW)
18	**Digital Businesses**	1. Agoro 2. Sosuda Tech 3. Nileboda
19	**E-service platforms**	1. Crawford Capital Limited 2. Ministry of Interior
20	**ISP**	1. Smart Network Limited 2. Deltanet Co Ltd (Deltnet Fiber) 3. ATX Net 4. Voda Network System Limited
21	**Education Sector**	1. Ministry of Higher Education, Science, and Technology 2. University of Juba
22	**Gender Priorities in ICT**	1. Ministry of Gender, Social Welfare, and Religious Affairs 2. GoGirls ICT Initiative 3. UN Women 4. South Sudan Women's Entrepreneurs' Association 5. South Sudan Women Finance
23	**Cyber Security**	1. NCA 2. MICT&PS
24	**ISP**	1. Pivotal System Ltd 2. Talia 3. Nile Fibertech Company Limited 4. Tonlect Enterprise (SSND) Co Ltd

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Table 9 List of stakeholders engaged in regional validation workshop 26-30 September 2022

No.	NAME	POSITION
East African Community (EAC)		
1.	Mr. Obura Carolos E. Assai	Deputy Director for Entrepreneurship, Ministry of Trade and Industry, The Republic of South Sudan
2.	Dr. Fred Simiyu	Ag. Director, Research and Trade Policy Analysis, State Department of Trade and Enterprise Development, Ministry of Industrialization, Trade and Enterprise Development, The Republic of Kenya
3.	Mr. Leonidas Ndayahundwa	Head of Legal and Consumer Protection Affairs, Telecommunications Regulatory and Control Agency, The Republic of Burundi
4.	Mr. Sosthene Bwigenge	Smart Cities and Communities Outreach Specialist, Ministry of ICT and Innovation, The Republic of Rwanda
5.	Mr. Samuel Walusimbi	Systems Administrator, Ministry of East African Community Affairs, the Republic of Uganda
6.	Eng. Peter Mwasalyanda	Assistant Director for ICT Systems and Service Development, Ministry of Information, Communications and Information Technology, the United Republic of Tanzania
7.	Pantaleo Kessy	Principal Physical Policy EAC
8.	Gabriel Kinu	ICT Expert Customs EAC
9.	James Kivuva	Senior Meteoroligist EAC
10.	Aileen Mallya	Webmaster EAC
11.	Alexis Songorwa	Senior Accountant EAC

12.	Damaris W Nyaga	Resource Mobilization Officer
13.	Aime Vwase	Acting Director Planning EAC
14.	Maria Sembua	IT Officer Trade Uganda
15.	Sarah Kabaluna	Communication Expert EAC
16.	Irene Charles Isaka	Director Social Sector EAC
17.	Pascal Mbayahaca	ICT Central Bank Burundi
18.	Edna Mbasa	ICT EALA Legislative Assembly
19.	Jean Paul	Chief Digital Officer Ministry of Trade Uganda
20.	Ngezi K	Chief Digital Officer
21.	Faith Didas Matoli	Ministry of Information Communication and IT
22.	Jean Bosco Ndikumana	Board Advisor in charge of Payment Systems
23.	Alice Zanza	Senior Financial Sector Specialist
24.	Zaid Mkangwa	East African Health Research Commission
25.	Opiyo Andrew Nyawango	Director of ICT
26.	Daniel Murenzi	Chief Principal Information Technology Officer – EAC
World Bank		
27.	David Satola	Lead Counsel

28.	Tim Kelly	Lead Digital Development Specialist
29.	Cecilia Paradi-Guilford	Senior Digital Development Specialist
30.	Martin Molinuevo	Senior Private Sector Specialist
31.	Victor Kyalo	Senior Digital Development Specialist
32.	Anat Lewin	Senior Digital Development Specialist
33.	Rory Macmillan	Consultant; Partner, Macmillan Keck, Attorneys & Solicitors
34.	Evalyn Anyango Oloo	Digital Development Consultant
35.	Lamia Naji	Digital Development Consultant

The following stakeholders were consulted during the World Bank mission to Adis Ababa and South Sudan from 30 August – 30 September 2022.

Table 10 Officials met during Mission

S/No.	NAME	POSITION, ORGANIZATION
1	Hon. Dr. Jacob Maiju Korok	Deputy Minister, Ministry of Information, Communication Technology and Postal Services (MICT&PS)
2	Dr. Lado Wani Kenyi	Undersecretary, Ministry of Information, Communication Technology and Postal Services (MICT&PS)
3	Mr. Thomas Gatkuoth Nyak	Director General of Telecom, Ministry of Information, Communication Technology and Postal Services (MICT&PS)
4	Mr. Peter Ajang Nyibong	Director General of Planning, MOFP
5	Mr. Papiti Okwaci Nyilek Ajak	CEO, South Sudan International Gateway (SSIGW)
6	Mr. Chol Joseph Mayen Dut	Director of Technical Services, National Communication Authority (NCA)
7	Mr. Henry Owera Bakata	Deputy Director of Policy, Ministry of Information, Communication Technology and Postal Services (MICT&PS)
8	Mr. Gabriel Gong Baak Madut	Assistant Director of Aid Coordination, Ministry of Finance and Planning (MoFP)
9	Ms. Alma Gabriel Korsuk	Ministry of Higher Education, Science and Technology (MoHEST)
10	Mr. Kennedy Alfred Remo Musa	Commissioner of ICT, National Revenue Authority (NRA)
11	Mr. Kenyi Alex Simon Monokoteng	Director of Accounts, Ministry of Information, Communication Technology and Postal Services (MICT&PS)
12	Mr. Tereka Moses Lumori	Senior Inspector of Procurement, Ministry of Information, Communication Technology and Postal Services (MICT&PS)

ANNEX 13: Procedures for managing contractors

This procedure was developed consistent with the World Bank Group ESHS Guideline which incorporates the IFC ESHS Guidelines, under the "Good Practice Note: Managing Contractors' Environmental and Social Performance". This is to remind the borrower's responsibility to comply with the ESHS Guidelines, loan agreement commitments, ESIA, local laws and regulations, and permits and standards, ensuring that any contractor providing services of any kind to the implementing entity duly follows these requirements throughout the duration of the contract, including any activity or services performed by subcontractors or third parties undertaking a contract from the contractor.

The PIU must use its direct control over contractors to ensure that E&S requirements are met by contractors. To achieve this commitment, the PIU needs to include in subcontracts the requirement to comply with all the E&S requirements that are appropriate for the works being subcontracted and consistent with the implementing entity's and the contractor's E&S management programs.

Understanding Implementation Responsibilities: The roles of the PIU and contractors in meeting E&S requirements are intertwined and must be worked out at the subproject level. In some cases, such as stakeholder engagement, both PIU and contractors will have certain obligations and limits and will need to coordinate their efforts. In others, such as monitoring, each party will monitor E&S performance, but at different frequencies and levels of detail. In all cases, the the PIU remains ultimately responsible to the World Bank for ensuring E&S requirements are met, with the responsibilities of the contractor defined in the contract. The design standards and requirements of subprojects (and operation standards) will also be set out in the terms of reference of the contract.

Contractor Oversight: The PIU will monitor contractors and their E&S performance and ensure the contractor monitors its own and all subcontractors' E&S performance throughout construction, including mobilization, the main construction phase, and demobilization. Clear responsibilities and reporting lines are essential to avoid duplication of effort or, conversely, gaps in monitoring. If operations are carried out under contract, or some work is performed by contractors, PIU and the contractor will monitor E&S performance during operations as well. All contractors engaged on the project operate in a manner consistent with the requirements of the ESSs, including the specific requirements set out in the ESCP.

PIU should require contractors to report on an agreed frequency their E&S performance and metrics (which shall include relevant information and data from subcontractors, as applicable). Timely reporting of E&S performance and results enables the client to identify opportunities for improvement, prevent poor performance issues, and assist contractors if remedial action is to be taken.

E&S Performance Meetings: Regular meetings are essential to ensure contractor performance is satisfactory and that project specifications are being met. The PIU may share performance monitoring results at weekly meetings with all contractors to effectively drive improved performance by introducing a competitive element, sometimes with small incentives. The authority of monitoring staff who control contractor performance also needs to be clarified and understood by contractors (for example, who gives instructions to stop work or proceed but with modifying the approach, scope, equipment, and so forth).

The PIU should ensure that contractors employ qualified E&S personnel to oversee E&S performance, and that contractor staffing and resources are commensurate with the magnitude and timing of work and potential E&S risks. PIU should also approve documentation, including for training programs, to ensure all staff are aware of E&S commitments and their part in meeting them.

Review and Approval of Contractor Site-Specific E&S plans: PIU is responsible for its contractors, meeting all of the project's E&S requirements, it is essential for PIU to review and approve project E&S management plans and procedures. These might include such plans as working within boundaries (footprint management), protection of biodiversity, land clearing and erosion control, traffic management, labor sources and methods of recruitment of workers, worker accommodation, noise and dust control, and possibly others. Where an ESMP has not been approved, no works will commence in the area.

Kickoff Meeting: Prior to early work activities, the PIU should hold a kickoff meeting with each of the contractors prior to arriving at the site. Timing of mobilization based on logistical issues, resources, customs delays, and so forth should be considered in the planning. The PIU and contractor project managers and subcontractors should participate in these meetings. The purpose is to review planned activities and schedules, review E&S requirements (among others), review the roles of the various parties in implementing and monitoring mitigation measures, and agree on project-specific induction and training content. These meetings should include a discussion about control of access to the site, use of security forces if applicable, and how to best coordinate the security management system and E&S activities at both the base camp (accommodation site) and any remote construction sites. Both client and contractor E&S representatives should be present to reiterate all E&S commitments and establish initial compliance points and coordination requirements during site establishment.

E&S Induction and Training: A general E&S site induction should be mandatory for all workers, with specialized technical E&S training delivered to staff. The degree of training should be based on the project's E&S risks, on the tasks that will be performed, the CoC, including the SEP, and SMP, and on the general E&S provisions that are applicable for all personnel, including contractors and subcontractors. All workers should be made aware of the worker GRM and Project GRM and how to access them. The PIU should provide GBV/SEA risk awareness training for staff at all levels, from contract management to day laborers, as per GBV Action Plan. Additional training may be needed for staff that will be responsible for implementing, monitoring, and reporting E&S performance. Once the general E&S induction is defined, a series of specific trainings may be required in order to ensure that the requirements, controls, and mitigation measures are well communicated and understood.

PIU Monitoring of Activities: The monitoring of contractor E&S performance by the PIU must be practiced throughout construction, from mobilization through demobilization. This should involve both visits to work locations and reviews of records kept by the contractor and of reports submitted by the contractor. The frequency of site visits should be commensurate with the magnitude of the E&S risks of the activities being carried out and permanence of potential impacts that could result from ongoing activities. Monitoring may be conducted by PIU E&S staff.

PIU E&S officers should review one or more recent inspection reports and the contractor's previous month's E&S progress report prior to visiting the site to monitor the contactor's E&S performance. They should do the same before participating in meetings where the contractor's E&S performance is to be discussed. PIU will review contractor reports and follow up as needed to ensure timely resolution of issues of noncompliance with E&S requirements. This may include additional visits to the contractor's site or offices, further communications with contractor E&S personnel, issuance of notices of deficiency or warnings to the contractor, and other actions as needed.

At any stage of construction or other work, if the contractor has not taken appropriate action to achieve compliance with E&S requirements after repeated notices of violation and warnings of noncompliance, and significant E&S impacts are occurring or imminent, the PIU should order the

contractor to stop work until E&S performance is brought under control and up to acceptable standards.

Contractor Monitoring and Reporting: The PIU should require contractors to monitor and keep records on E&S performance in accordance with the E&S management plans. This may include monitoring of E&S matters, scheduled and unscheduled inspections to work locations, observations made during routine activities, desk reviews, drills, and any other monitoring protocols implemented by the contractor to ensure E&S compliance.

Responsibilities for monitoring need to be clear between the client and contractor, and results (if client and contractor are both collecting data) must be comparable, for example, collected using the same methodologies, analyzed at the same labs, and using similar equipment, and so forth.

The PIU should require contractors to report on E&S performance on at least a monthly basis throughout the construction phase, including mobilization, construction, and demobilization. This could be more frequent for more sensitive E&S projects. It can be part of the overall engineering progress report or a stand-alone E&S report. The table below shows the E&S parameters considered in the reporting of E&S performance.

Parameters to consider for E&S reporting by the contractor at least on a monthly basis.

Item	Parameter	Description
1	*Safety*:	hours worked, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).
2	*Environmental incidents and near misses*:	environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.
3	*Major works*:	those undertaken and completed, progress against project schedule, and key work fronts (work areas).
4	*E&S staffing*:	new hires and departures, and listing of current staff and titles.
5	*E&S requirements*:	noncompliance incidents with permits and national law (legal noncompliance), project commitments, or other E&S requirements.
6	*E&S inspections and audits*:	by contractor, engineer, or others, including authorities—to include date, inspector or auditor name, sites visited and records reviewed, major findings, and actions taken.
7	*Workers*:	number of workers, indication of origin (expatriate, local, nonlocal nationals), gender, and skill level (unskilled, skilled, supervisory, professional, management).
8	*Training on E&S issues*:	including dates, number of trainees, and topics
9	*Footprint management*:	details of any work outside boundaries or major off-site impacts caused by ongoing construction—to include date, location, impacts, and actions taken.
10	*External stakeholder engagement*:	highlights, including formal and informal meetings, and information disclosure and dissemination—to include a breakdown of women and men consulted and themes coming

		from various stakeholder groups, including vulnerable groups (e.g., disabled, elderly, children, etc.).
11	*Details of any security risks*:	details of risks the contractor may be exposed to while performing its work—the threats may come from third parties external to the project or from inappropriate conduct from security forces employed either by the client or public security forces.
12	*Worker grievances*:	details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.
13	*External stakeholder grievances*:	grievance and date submitted, action(s) taken and date(s), resolution (if any) and date, and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report. Grievance data should be gender-disaggregated. Particular sensitivity may be needed around SEA or GBV issues raised.
14	*Major E&S changes*:	to E&S management, or E&S practices (most often done by the Project Implementing Entity)
15	*Deficiency and performance management*:	actions taken in response to previous notices of deficiency or observations regarding E&S performance and/or plans for actions to be taken—these should continue to be reported until the client determines the issue is resolved satisfactorily.

Annex 14: Security Checklist

Name of Contractor: **Date:** **Name of Respondent:**				
No.	Criteria	Yes	No	Comment/ Explanation
	General Security			
1.	Does the Contractor conduct security risk assessments prior to all activity?			
2.	Is there a continuous review process of the security risk assessments in place?			
3.	Are all Security protocols linked to these risk assessments, i.e. does the level of risk identified directly impact on which security mitigation measures are employed?			
4.	Does the Contractor have a clear, formal and transparent internal Security hierarchy with clearly denoted security responsibilities?			
5.	Does the Contractor employ a full-time security professional to manage and mitigate risk for its personnel in South Sudan?			
6.	Do Contractor staff responsible for security have the authority to take or demand corrective action?			
7.	Is there an effective procedure to escalate or deescalate security Contractor posture?			
8.	Does the Contractor maintain SOPs for the Security of personnel, property, and infrastructure?			
9.	Are all Contractor personnel aware of their responsibilities within these SOPs?			
10.	Does the Contractor hold and maintain communication protocols, are these robust enough to ensure communication with all personnel during emergencies? i.e. can the Contractor reach all of its personnel all of the time?			
11.	Does the Contractor hold and maintain movement protocols, are these implemented effectively and are they linked to Security Risk Assessments?			
12.	Are Contractor staff who are responsible for security obliged to take action for all project missions?			

13.	Does the Contractor maintain access mapping?			
14.	Do clear lines of communication exist for project workers when organizing missions and understanding the required levels of security and mitigation measures?			
15.	Are there internal processes in place to record, track, and monitor the ongoing missions and any action taken on them?			
16.	Is there a templated and mandated security reporting framework?			
17..	Are project personnel provided with pre deployment briefings (security briefings), HEAT training, culture briefings, and training on the Contractor's security procedures?			
18.	Are all workers (including from sub-contractors) inducted to internal safety and security policies?			
19.	Does the Contractor maintain and train its personnel on in extremis 'Actions on'?			
20.	Does the Contractor conduct regular security exercises, tabletop and physical, to test risk mitigation measures?			
21.	Does a process for quality assurance and periodic evaluation of the internal security policies and procedures exist, that informs proactive actions for development?			
22.	Does the Contractor have a quality assurance mechanism to qualify security contractors' performance?			
23.	Do clear security service procurement guidelines exist?			
24.	Is there a security component to the recruitment process, i.e. criminal background checks?			
25.	Does the Contractor have established community engagement protocols ?			
26.	Does the Contractor have Crisis response procedures (including Hostage incident management protocols)?			
27.	Does the Contractor have effective Headcount procedures in place i.e. can it, at any time, accurately locate all its personnel?			
28.	Does the Contractor hold and maintain effective Relocation and Evacuation procedures? and are these tested regularly?			
29.	Are these Relocation and Evacuation procedures tested regularly?			
30.	Do the workers' safety and security policies cover all types of workers?			
31.	Does the Contractor request every worker to sign a Code of Conduct with reference to internal safety and security policies?			

32.	Does the Contractor require every sub-contractor to request from its workers a signed Code of Conduct with reference to internal safety and security policies?			
33.	Is the Contractor and its subcontractors able to furnish records of all mission information and project worker incidents, and provide them to the PIU?			