



MINISTRY OF WORKS AND TRANSPORT

PROPOSED UPGRADING OF SELECTED TOWN ROADS IN KOBOKO, YUMBE AND MOYO TOWNS AND ACCESS ROAD TO BIDIBIDI

Environment and Social Impact Assessment (ESIA)

SCOPING REPORT

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Acronyms

AIDS:	Acquired Immune Deficiency Syndrome
CFR:	Central Forest Reserves
CMP:	Construction Management Plan
CRMP:	Cultural resources management plan
dBA:	Decibel of scale A
DBST:	Double bituminous surface treatment
DIA:	Direct Impact Area
ESIA:	Environmental and Social Impact Assessment
ESMMP:	Environmental and Social Management and Monitoring Plan
GDP:	Gross Domestic Product
GIS:	Geographic Information System
GOU:	Government of Uganda
HSE:	Health, Safety & Environment
INDIA:	Indirect Impact Area
MoWT:	Ministry of Works & Transport
NEMA:	National Environment Management Authority
NFA:	National Forestry Authority
OHS:	Occupational Health and Safety
PCR:	Physical cultural resources
PEAP:	Poverty Eradication Action Plan
SHS:	Second hand smoke
ToR:	Terms of Reference
NWSC:	National Water and Sewerage Corporation
UBOS:	Uganda Bureau of Statistics
UNRA:	Uganda National Roads Authority
UTM:	Universal Transverse Mercator
WB:	World Bank
WRMD:	Water Resources Management Directorate

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Definitions:

Carriageway:	Area of road used by vehicles. It is bounded on either side by road shoulder.
Casual water:	Standing water which results from roadwork activities and is found in puddles or containers on or near construction sites. It often is a breeding ground for disease vectors e.g. snails and mosquitoes, which can affect areas surrounding the road site.
Chainage:	Distance along a curved or straight survey line from a fixed commencing point, similar to mileage. Usually presented in “kilometers + meters” (e.g. 101+30)
Key stakeholders:	Those inhabitants of an area affected by a project who have the most to lose and the most to gain from the completion of the project, and whose concerns must be addressed in an environmental assessment.
Murram:	Refers to gravel suitable for road building.
Landscape:	Refers to the spatial organization of an environment on a broad scale, and how that organization shapes, and is shaped by, the activities which take place within it.
Natural areas:	Terrestrial and aquatic areas in which the component ecosystems are characterized primarily by native species, and in which human activities have not altered ecological function to the point where the ecosystems have changed in character or distribution.
Pavement:	A structure composed of layers of increasing rigidity and strength and of varying thickness, designed to carry traffic loads on natural soil formations, typically comprising subgrade, sub-base and base layers.
Proponent:	The agency (UNRA) proposing, and has responsibility for, a road project.
Public involvement:	The dialogue, encompassing consultation and communication, between a project proponent and the stakeholders. It includes dissemination, solicitation, and presentation of information.
Roadkill:	An animal / animals that has/have been struck and killed by motor vehicles along a road.
Road prism:	Area of the ground containing the road surface cut slope and fill slope.
Road reserve:	Area of land typically extending from the centre line of the road, owned by the road and within which the roads authority has rights to extend the

road and place associated infrastructure. This area can also be used for placing surface or subsurface utilities (water mains, electricity, telephone cables etc).

Shoulder:

Area o road (typically 1-2.0 m wide), between the carriageway and drainage ditch, often used by pedestrians and cyclists, may or may not be sealed.

1.0 INTRODUCTION.

1.1 BACKGROUND

The Government of Uganda has proposed the Northeastern Road Corridor Asset Management Project (NERAMP 2) which aims to enhance climate resilience, improve road safety and reduce transport costs along the Tororo-Mbale-Soroti Road corridor, as well as promote social enterprise in the refugee hosting districts of Koboko, Yumbe and Moyo. Given that Uganda is a landlocked country, the Tororo-Mbale-Soroti road corridor is critical to connect agricultural, processing and industrial activities to domestic and regional markets. The corridor provides a crucial transit route for regional trade, particularly with South Sudan and Eastern DRC. However, the corridor is highly vulnerable to climate change impacts like floods, landslides and rising temperatures and consequently experiences deteriorating road conditions and frequent disruptions that contribute to higher transport costs and poor road safety. Therefore, investing in rehabilitating and upgrading the Tororo-Mbale-Soroti road corridor to climate resilient standards strengthens the domestic and regional road networks and supports regional trade.

In addition, improving the resilience of corridor access roads and town roads in the remote Koboko, Yumbe and Moyo districts is critical to safeguarding livelihoods, social and economic activities, thus enhancing the resilience of the communities served. The refugee hosting districts of Koboko, Yumbe and Moyo are experiencing climate change impacts like floods that disrupt access to social services and economic opportunities. The government recognizes that improving connectivity is essential for unlocking economic opportunities in underserved regions and in its revised Nationally Determined Contribution (NDC), Uganda set the key priority of creating climate resilient transport infrastructure to support economic growth. This goal is reinforced by the National Climate Change Act, which underpins related climate policies. As Uganda continues to grapple with high youth unemployment, sustained investment in resilient roads offers a pathway to inclusive growth, structural transformation, and the realization of Vision 2040's employment targets. A comprehensive approach that includes upgrading district and rural roads to climate resilient standards is essential for maximizing the benefits of major roads. Additionally, roadside social infrastructures such as market access points, rest areas, transport stops, and facilities for pedestrians support community well-being and economic activity, including job creation both during and after road rehabilitation and upgrading.

The proposed Project is to be implemented with financial support from the World Bank. The Project is a follow-on operation to the Uganda North-Eastern Road Corridor Asset Management Project (NERAMP) (P125590) which closed on December 31, 2025; and the Roads and Bridges in the Refugee Hosting Districts/Koboko-Yumbe-Moyo Road Corridor Project (P171339) which is scheduled for completion in 2027.

The proposed Project will consist of four components. Component 1: Climate resilient upgrading of highway corridor – Road rehabilitation, operations and maintenance; will be the construction of the Tororo - Mbale – Soroti Road (150.8 km) and a weighbridge along the Tororo-Mbale Section. This road section was initially included in the Parent project - NERAMP (P125590) and was later canceled due to lack of financing and imminent closing

date of the project. Component 2: Climate resilient upgrading and rehabilitating of town roads and access roads infrastructure in the refugee hosting districts of Koboko, Yumbe and Moyo; will be the upgrading to climate resilient standards of 15km priority town roads that connect to the Koboko-Yumbe-Moyo project corridor, schools, health facilities, and local markets. It will cover the upgrading to climate resilient standards of 15km of access roads leading up to the known refugee settlements along the project corridor of the Koboko-Yumbe-Moyo Road. Component 3: Construction of climate resilient roadside stations, weighbridges and markets; will be construction to climate resilient standards of three (3) Vending Stations i.e., one in each District - Koboko, Yumbe and Moyo, a Rest Station and a Weighbridge along the Koboko-Yumbe-Moyo Road. Component 4: Contingent Emergency Response; will support the GoU's response in the event of an emergency in line with World Bank procedures on disaster prevention and preparedness.

This report is a Scoping Report and Terms of Reference for the Environmental and Social Impact Assessment (ESIA) for the proposed town roads consisting of 15.6 km of town roads in Koboko, Yumbe and Moyo Districts; and 15 km Access Road in Yumbe District

RISK RATING AND LEGAL REQUIREMENT FOR ESIA

Under the ESF, Environmental and Social risk of NERAMP 2, was rated as “high risk” to the scope of activities under components 1, 2, and 3. The Project risk rating applies to the establishment of the construction of access roads and town roads (Component 2) because it will involve among others clearing and grubbing of vegetation and topsoil, excavation of drainage channels, hauling of construction materials and extraction of gravel and quarrying of stones and crushing of stone aggregates; and laying and compact of materials. These activities will also lead to influx of construction workers. As the locations of the roads are on habitats that have been modified through small holder agricultural activities over the years and town roads on urbanized location, these activities will result in temporary and localized environmental impacts that include loss of vegetation and topsoil, increased soil erosion and sedimentation of nearby water bodies, dust emissions, noise and vibration. However, they present substantial to high health and safety risks to workers and communities particular accidents involving construction traffic and equipment operation; and social risks that include land acquisition, disruption to local communities during construction, increased vulnerability of disadvantaged groups, including refugees, women, children, and the elderly and possible heightening of the risk of SEA/SH. Therefore, an ESIA is required under the Environmental and Social Standard 1 (ESS1) and other applicable standards of the ESF

The ESF requirement to undertake ESIA is consistent with national legal requirements. Section 113 of the National Environment Act (NEA), Cap. 181 of 2019, requires a developer of any project listed in Schedule 5 of the Act to conduct an ESIA, beginning with scoping, preparation of Terms of Reference for the environmental and social impact study, and implementation of the study itself. The proposed construction of access roads and town roads falls under the item (c).of category 1 – “Transport, transportation equipment and related infrastructure” - of Schedule 5 of the Act, because the roads exceed six (6) metres in width and involve land acquisition

1.2 PROJECT JUSTIFICATION

The upgrade of Koboko-Yumbe-Moyo road will certainly improve mobility and accessibility to refugee host areas. Undertaking construction of the selected town roads in Koboko, Yumbe and Moyo will further enhance the benefits expected from the major road upgrade project. Selected town roads will provide the last mile connection to social service delivery centres and tourism infrastructure. The proposed 11km segment to Bidi Bidi refugee settlement will enhance timely provision of basic services and commodities that will always make a difference in the lives of refugees resident in the settlement.

Uganda ratified the 1951 Refugee Convention on 27th September 1976, and currently hosts over a million refugees, mainly from South Sudan (IRRI, 2019); of whom more than 50% (524,703 refugees) are accommodated in the West Nile region in the districts of Arua, Koboko, Yumbe and Moyo. Refugees in this region are hosted in 6 settlements with an average of 87,451 refugees per refugee settlement hence contributing to about 27% of the regional population (IRRI, 2019). Also, a significant number of refugees live outside the settlements in the towns of Koboko, Yumbe and Moyo among other urban areas in West Nile. Last mile road connections will greatly relieve extreme pressure on the existing social services especially schools, health facilities, water sources and physical infrastructure including roads.

Humanitarian Agencies operating in Bidi Bidi settlement where an 11km segment is proposed deliver needed assistance and render refugees a semblance of normality in the face of mobility and connectivity challenges triggering a horde of other tertiary problems associated with displacement (food shortage, malnutrition, communicable disease outbreaks, sexual violence and incessant conflict with host communities). Improvement in the 11km segment will not only reduce emergence response time and ease distribution of relief items within the refugee settlements but will come with knock on effects within the refugee host communities and the entire impact zone.

1.3 PURPOSE AND OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL IMPACT STUDY.

In pursuit of environmental sustainability and social equity, it is a statutory requirement by Uganda Government laws (*Environmental Act Cap 181*) and other associated pieces of legislation that development projects that are deemed to bear significant environment and social risks and impacts undertake comprehensive Environment and Social Impact Assessment. The purpose of such an assessment will be to guide mandated agencies in reaching informed decisions on the most practical and appropriate way of achieving designated project objectives while promoting environmental quality, conserving natural resources, maintaining ecosystem health and ensuring social equity and justice. The ESIA study is deliberately executed to accord all stakeholders within the impact area of the project an opportunity to deliberate on the nature of the project and inform its design such that the projects address current development constraints and vulnerabilities.

The World Bank under its Environment and Social Framework (ESF) and subsequent Environment and Social Standards (ESS) and specifically under ESS1 requires that an ESIA is carried out to identify, analyse and mitigate potential environment and social impacts and risks associated with projects deemed to carry significant environment and social risks and impacts.

This ESIA is thus undertaken in compliance with the legal and funding requirements as specified above with the implicit purpose of promoting environmental and social sustainability while in pursuit of desired economic goals accruing to construction of the selected ton road.

The assessment will be proportionate to the potential risks and impacts of the project, and will assess, in an integrated way, all relevant direct, indirect and cumulative environmental and social risks and impacts throughout the project life cycle, including those specifically identified in the applicable Environmental and Social Standards (ESSs) 2–10 of the World Bank’s Environmental and Social Framework (ESF). The environmental and social impact study will result into production of an Environmental and Social Impact Statement where all the findings will be presented.

1.4 SPECIFIC OBJECTIVES OF THE ESIA

- I. To provide comprehensive base line description of the project site, detailing its current biophysical, socioeconomic baseline and physical infrastructure conditions in the impact zone.
- II. To provide a detailed description of the design to the proposed urban roads and activities to be undertaken during their construction.
- III. To examine viable road based alternatives to the proposed urban road design and suggest the most environmentally and socially sustainable alternative.
- IV. To identify all possible positive and negative environmental and social impacts likely to result from the construction and operation of the proposed selected town roads road upgrade project in the towns of Koboko, Yumbe and Moyo together with the 11km segment to Bidi Bidi Settlement.
- V. To evaluate the significance of all negative impacts associated with the proposed project and prescribe appropriate mitigation measures.
- VI. To draft an Environment and Social Management Plan to guide implementation of the road upgrade project.

1.5 PURPOSE AND OBJECTIVES OF THE SCOPING STUDY.

This report is intended to inform statutory agencies and other stakeholders of the environment and social risks and impacts that will be covered in the ESIA and describe how each will be assessed during the ESIA. The scoping exercise was aimed at determining the scope of work for the ESIA and development of terms of reference for the environmental and social impact study. Regulation 13 (3) requires the developer to prepare a Scoping Report and Terms of Reference for the ESIA after undertaking the scoping exercise. The scoping exercise as specified in regulation 13 (2) of the National Environment (Environmental and Social Assessment) Regulations, 2020 aims to

- i) Provide a concise understanding of the proposed project.
- ii) Describe the biophysical and socio-economic environment of the proposed project area.
- iii) Establish the relevant policy and legal framework for the proposed project
- iv) Identify and focus key environment and social issues to be assessed by the ESIA.
- v) Define appropriate spatial, temporal and content scope of the ESIA
- vi) Suggest the appropriate approach and methodologies to be used in conducting impact assessment studies.
- vii) Identify and inform key stakeholders of the proposed project and solicit for their views and concerns.
- viii) Obtain initial stakeholder views from relevant lead agencies and the affected public
- ix) Undertake to identify, define and analyze viable project alternatives.
- x) Establish the terms of reference for the ESIA study.

The scoping exercise was aimed at determining the scope of work for the ESIA and development of terms of reference for the environmental and social impact study. Regulation 13 (3) requires the developer to prepare a Scoping Report and Terms of Reference for the ESIA after undertaking the scoping exercise.

Specific objectives of Scoping

The scoping exercise as specified in regulation 13 (2) of the National Environment (Environmental and Social Assessment) Regulations, 2020 aims to:

- i) determine the nature of the project area, including its physical, biological, socio-economic and cultural aspects;
- ii) identify significant issues to be considered during the environmental and social impact assessment;
- iii) identify the main stakeholders;
- iv) include initial stakeholder consultations with the relevant lead agencies and the public likely to be affected by the project;
- v) define the boundaries for an environmental and social impact assessment in terms of time, space and subject matter;

- vi) define reasonable and practical project alternatives;
- vii) set requirements for collection of baseline information and include any other relevant information; and

Lead to identification of the relevant inter-disciplinary expertise necessary to address the identified significant impacts

1.6 ESIA PROCESS IN UGANDA

The EIA process will follow the legal procedures as contained in EIA reference manual for Uganda 2002. The flow chart in Figure 1.1 summarizes the process.

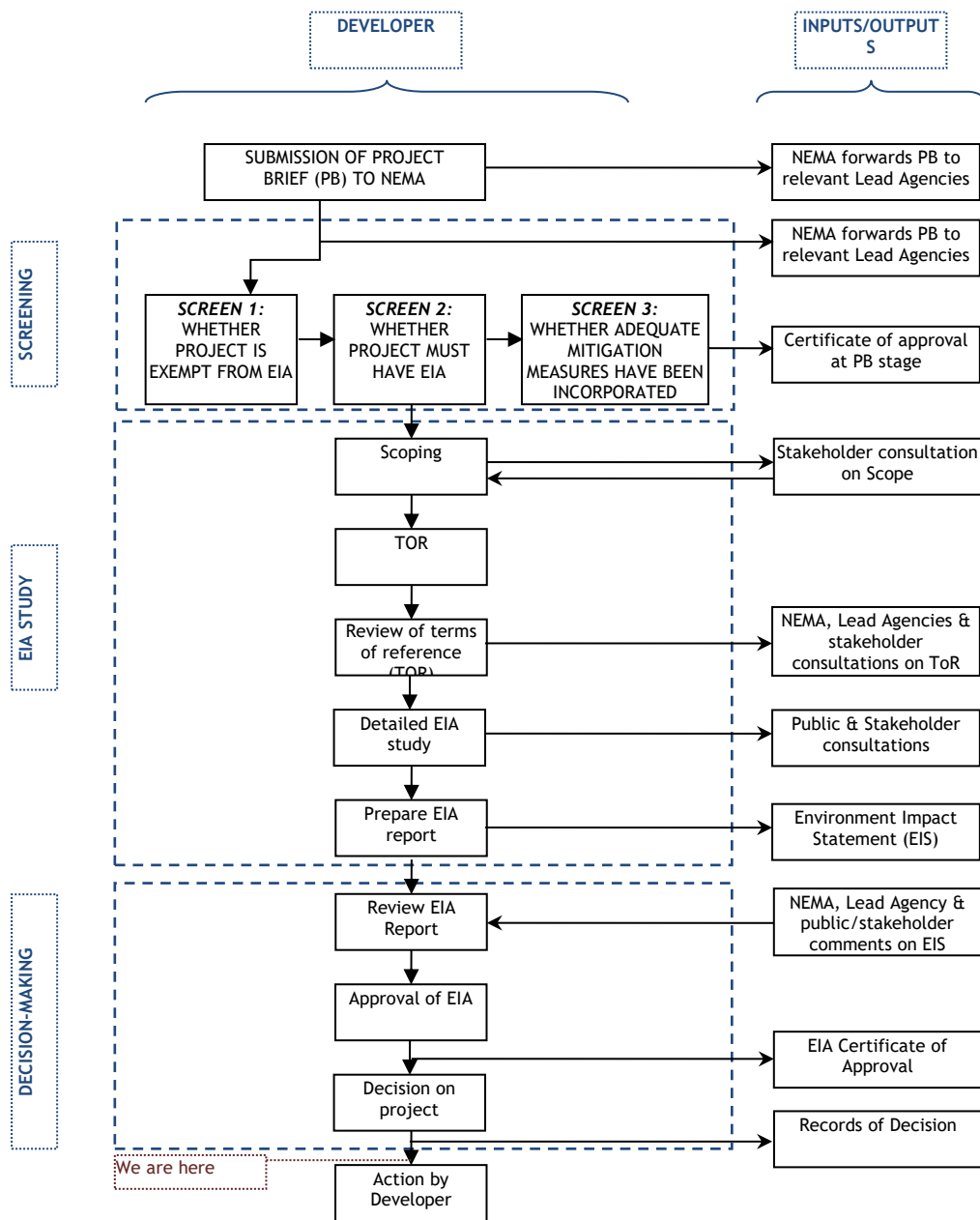


Figure 1. 1: ESIA Process in Uganda

1.7 SCOPE OF ESIA

The upgrade of selected urban roads in the 3 refugee hosting districts (Koboko, Yumbe and Moyo), and the 15km segment connecting to Bidi Bidi settlement is not a new green field road project. Unlike new green field roads where ESIA focus and interest is on preventing impacts on hitherto unmodified, or areas with limited ecological modifications, focus of environmental assessment for road upgrade projects concentrates on impacts resulting from upgrade and expansion operations. In assessing such road projects, attention should focus on pavement construction and expansion, their strengthening,

improving drainage works and impacts of ancillary operations including construction of workers and equipment camps, sourcing of raw materials and their transportation.

The direct impact zone on these urban roads shall be greatly reduced given their design, limited linear coverage, proposed approach to construction and the fact that the selected roads will share auxiliary facilities with the main Koboko-Yumbe-Moyo (103km) project. The direct impact area will be set 15m from the center line on either side of the carriage way while the indirect impact zone has been set at 3km.

The assessment also recognizes the footprint of auxiliary facilities supporting construction operations including material source areas, dump sites, water extraction points and equipment parking bays. These have already undertaken standalone ESIA assessment much as they are beyond the 3km indirect impact zone.

Particular attention on the selected town roads upgrade project will focus on homesteads, commercial enterprises, road side petty traders and socioeconomic facilities, power and telecommunication infrastructure in Koboko, Yumbe and Moyo towns. The selected receptor environments will certainly demand careful assessment. Improper construction operations during widening of these selected roads may require limited land, affect properties, petty business units and could contribute to increased runoff into water streams even though the design opportunely aims to raise and widen the carriageway.

1.8 STRUCTURE OF THIS SCOPING REPORT

This scoping report is organized in chapters that follow a chronological order as presented below.

Chapter 1 Introduction.

The chapter introduces the project within the context the selected urban road and refugee settlement access road.

Chapter 2. Policy, Legal and Institutional framework.

The chapter describes national policy and legal framework used to guide the Environment and Social Assessment and further project implementation. The chapter also describes the Environment and Social Standards (ESS) of the World Bank triggered by the project. The chapter further discusses the relevant permits and licenses required for the project proponent.

Chapter 3 Project Description

The chapter dwells on description of the quarry and crusher project. The report details the different sections of the quarry and rock crusher that are to be installed on site together with equipment to be used.

Chapter 4 Environment and Social Impact Assessment Approach and Methodology

The Chapter presents the approach and methods used to determine baseline conditions and analyze impacts arising from quarry operations.

Chapter 5 Environment and Social Baselines

This chapter presents the environment and social baselines of the project impact zone. The chapter documents biophysical environment conditions and socioeconomic conditions of communities within the impact area.

Chapter 6 Stakeholder Consultation

Chapter six of the scoping report focuses on stakeholder consultation at the different levels. The key stakeholders are identified and their interests explained.

Chapter 7 Alternative Identification and Analysis

Identification and analysis of alternatives is undertaken in this chapter. The chapter identifies feasible project alternative both technical and spatial alternatives are presented.

Chapter 8 identification of Potential Impact and Risks

The Chapter identifies potential impacts and risks arising from upgrading selected roads within Koboko, Yumbe and Moyo towns and Bidi Bidi Refugee settlement.

Chapter 9 Draft Terms of Reference

The scoping report has to conform to Uganda's Environment Impact Assessment procedures. The procedures stipulate that the scoping report must include draft terms of reference (ToR) for the subsequent ESIA. The draft ToRs will be reviewed by NEMA before approval. Stakeholder consultations have to be undertaken to inform impact identification, analysis and aid mitigation.

1.6 TERMS OF REFERENCE FOR THE SCOPING REPORT.

The scoping report has to conform to Uganda's Environment Impact Assessment procedures. The procedures stipulate that the scoping report must include draft terms of reference (ToR) for the subsequent ESIA. The draft ToRs will be reviewed by NEMA before approval. Stakeholder consultations have to be undertaken to inform impact identification, analysis and aid mitigation.

2.0 PROJECT DESCRIPTION

This chapter describes the nature and extent of the proposed selected town roads upgrade and the access to Bidi Bidi Settlement project under component 2 of the Northeastern Road Corridor Asset Management project, component 2, construction of access roads to refugee settlements and roads in Koboko, Yumbe and Moyo Town Councils

2.1 PROJECT LOCATION.

The selected town roads for upgrade are all located along the townships along the Koboko-Yumbe – Moyo Road. The selected roads are presented in the table below:

Table 2. 1: Selected Urban Roads for Upgrade on Component 2

Moyo District	Length (km)	Coordinates		
		Zone	Easting	Northing
Moyo Town Council				
Okudi Road	0.73	36N	358401	404100
Okudi Road	0.73	36N	357820	404315
Fr. Bilbao Road	0.18	36N	357876	404167
Fr. Bilbao Road	0.18	36N	357979	404322
Moyo Town Council PS Road	0.36	36N	358389	404475
Moyo Sec. Sch. Road	0.94	36N	359595	404877
Addi Gabriel Madra Road	0.08	36N	358201	404005
Addi Gabriel Madra Road	0.08	36N	358111	404037
Kerelu Crescent Road	0.16	36N	358181	403963
Kerelu Crescent Road	0.16	36N	358062	404003
Besia Road	1.04	36N	358425	403739
Besia Road	1.04	36N	357530	404041
Lowi Quarter Road	0.73	36N	358477	403853
Lowi Quarter Road	0.73	36N	358056	403271
Park View Road	0.34	36N	358249	403609
Park View Road	0.34	36N	358211	403959
Mary Mania Road	0.13	36N	358207	403784
Mary Mania Road	0.13	36N	358080	403759
Dr. Moriku Joyce Kaducu Road	0.11	36N	358108	403772
Dr. Moriku Joyce Kaducu Road	0.11	36N	358108	403874
Vukoni Jimmy Okudi Road	0.1	36N	357735	404040

Vukoni Jimmy Okudi Road	0.1	36N	357731	403980
Prof. Dranzoa Christine Road	0.1	36N	357936	403938
Prof. Dranzoa Christine Road	0.1	36N	357951	404018
Peter Iku Dolo Road	0.26	36N	358685	404145
Peter Iku Dolo Road	0.26	36N	358649	403814
Access to the new district h/qtrs	0.1	36N	354245	402641
Access to the new district h/qtrs	0.1	36N	354203	402722
Koboko Town Council				
Alli-Kenyi to Birijaku customs	1.897	36N	270823	377731
Alli-Kenyi to Birijaku customs	1.897	36N	273327	377234
Transport Road	0.56	36N	273268	377789
Transport Road	0.56	36N	273228	377244
Samuel Baba Road	0.525	36N	273418	377189
Samuel Baba Road	0.525	36N	273360	377699
Lurujo to Sinyani Bridge Road	0.8	36N	273537	376881
Lurujo to Sinyani Bridge Road	0.8	36N	274441	375873
Gen. Katumba Wamala Road	0.8	36N	273382	378112
Gen. Katumba Wamala Road	0.8	36N	273557	377999
Aliopa Road	1.076	36N		
Amiji Road	0.09	36N	273425	377349
Amiji Road	0.09	36N	273346	377353
Fadimula Road	0.087	36N	273430	377526
Fadimula Road	0.087	36N	273351	377532
Yumbe District				
Lori - Bidibidi Road	15	36N	312833	388707
Lori - Bidibidi Road	15	36N	326371	385275
Ring Road	5.6	36N	303569	383041
Ring Road	5.6	36N	305006	383644



Plate 2. 1 Image of Koboko Municipality Showing Selected Roads

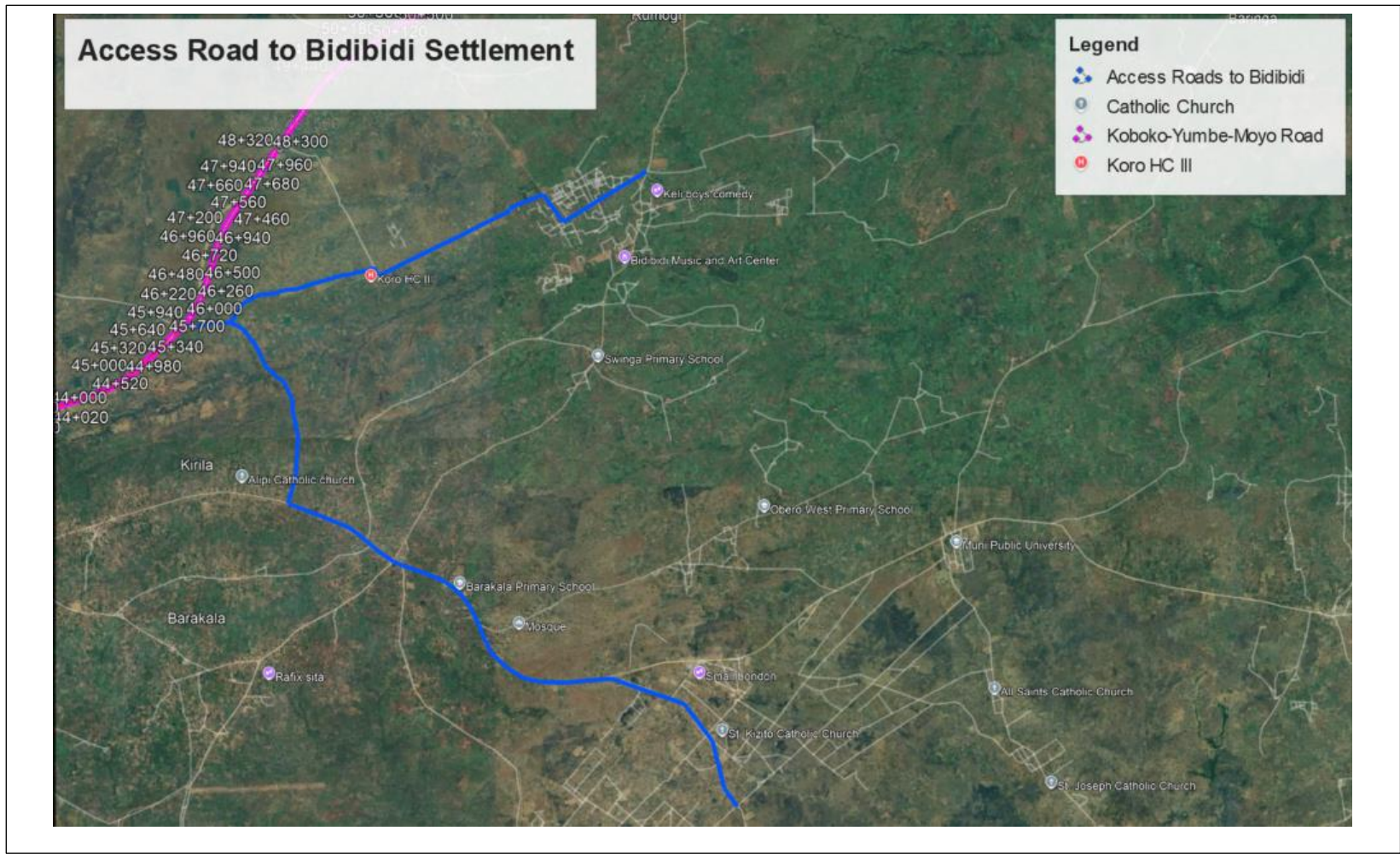


Plate 2. 2 Image of Yumbe TC Showing Selected Roads and Bidi Bidi Settlement Access Road

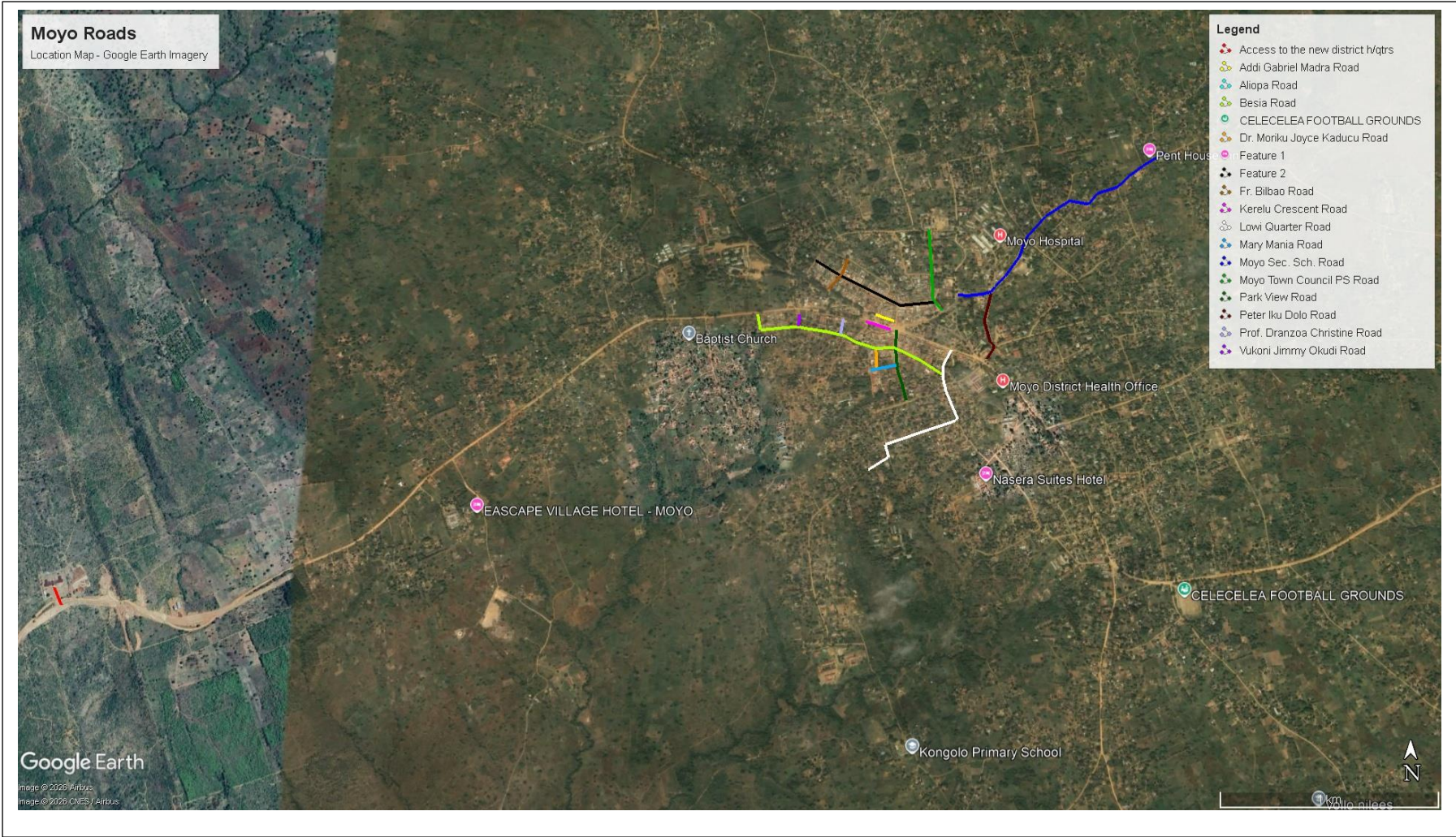






Plate 2. 3 Image of Moyo TC Showing Selected Roads

2.2 SENSITIVE BIOPHYSICAL AND SOCIOECONOMIC RECEPTORS AREA

The selected roads for upgrade are embedded within urban centers in a heavily modified biophysical environment. With the exception of the access to Bidi Bidi settlement, much of the impact areas of these roads are characterized by clustered linear ribbon settlements and occasional service delivery centers. While some are lined with underground telecommunication cables and/or overhead powerlines on wooden towers, others lack such services. The scoping report has identified mainly structures as the critical sensitive receptors on these selected town roads and Bidi Bidi Settlement Access Road. The table below presents identified sensitive receptors.0781123582

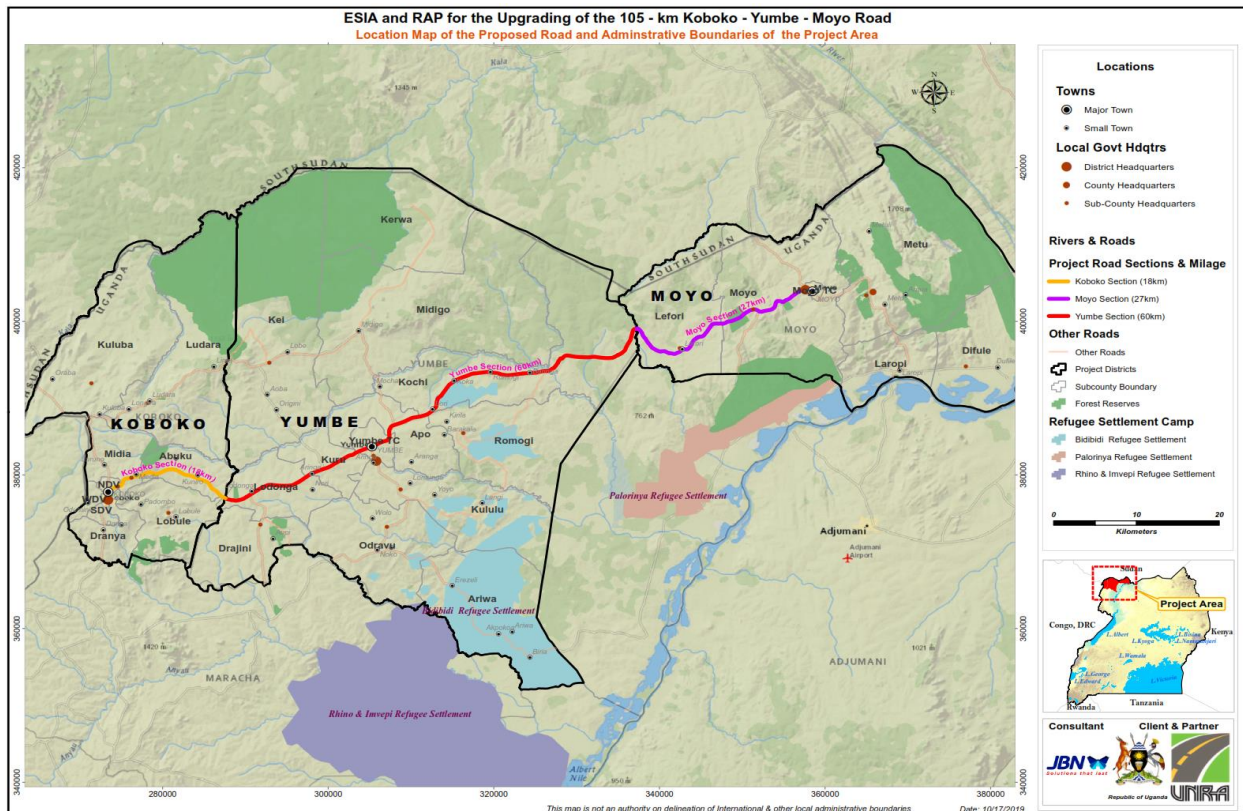
Table 2. 2 Sensitive Receptors along the selected roads

SN	Coordinates /Location	Image	Observation
1	Alli Kenyi Road Small London.		4 Kiosks exist within the ROW. Municipality will engage with owners to extend behind to provide work zone
2	Ali Kenyi Road Small London Town ship		4 Temporary structures with an offset from center line of 7m
3	Moyo School of Nursing and Midwifery & Hostel 36N 0358111, 0404770		

SN	Coordinates /Location	Image	Observation
		 <p>CAMON 20 2026.02.12 14:40</p> <p>26mm f/1.7 1/948s ISO53 3°39'8"N 31°43'18"E</p>	
	<p>Homing Dove Primary School 36N 0357975, 0404319</p>	 <p>CAMON 20 2026.02.20 13:23</p> <p>24mm f/1.7 1/727s ISO53 3°39'20"N 31°43'12"E</p>	<p>The road at this point has a corridor of about 25m. The critical issue will be management of construction noise and dust. Sexual Harassment and Gender.</p>
	<p>Moyo General Hospital 36N 0358706, 0404181</p>		<p>The offset is enough to accommodate the road. The critical issue will be construction management especially noise and dust management.</p>

SN	Coordinates /Location	Image	Observation
		 <p>CAMON 20 • 2026.02.20 13:31</p> <p>24mm f/1.7 1/1543s ISO50 3°59'19"N 31°45'34"E</p>	

Map 2.1 Locational Map of Koboko – Yumbe – Moyo Road



2.3 PROJECT OBJECTIVES

The proposed upgrade of Koboko-Yumbe-Moyo road has been motivated by the following objectives

- The establishment of an alternative shorter road link from Arua to Juba through Koboko, Yumbe and Afogi Southern Sudan.
- Provide an all-weather transport infrastructure to support the several humanitarian initiatives that are being undertaken in these refugee settlement areas by the GoU and international organizations
- Foster regional integration through reliable, efficient and seamless transport infrastructure;
- Enhance increased inter-regional trade volumes and enhance regional competitiveness;
- Creation of an enabling environment for unlocking the binding constraints to the primary growth sectors of agriculture, forestry, tourism, mining and oil & gas in the project’s area of influence;
- Facilitate the consolidation of peace and development especially in the North-East DRC and South Western South Sudan;

- Enhancement of connection between the capitals of the DRC (Kinshasha) and Southern Sudan (Juba) through future developments of water transport on R. Congo and road upgrading's from Goli, Arua, Koboko to Juba

2.4 PROJECT AREA OF INFLUENCE

The area of influence denotes the zone which will be most affected by the project and associated actions. To understand potential impacts and design appropriate mitigation measures, the area of influence has been divided into the Direct Impact Area (DIA) and the Indirect Impact Area (INDIA). In defining these impact zones, cognizance was accorded to spatial extent of planned project activities, duration and intensity of proposed activities ++both during construction and road use.

DIA is the area that will receive primary impacts resulting from project activities. The key DIA areas include, road diversions, borrow pit areas and spoil disposal sites as well as rock quarries. Much as these selected roads upgrade ESIA covers the Direct Impact Area of the carriageway, the DIA for auxiliary facilities has already been designated since these facilities are already in use, serving the main road project. The Direct Impact Area is the zone in which all project construction activities have to be concentrated and to avoid any transgressions away from the designated DIA during construction, the contractor is required to mark off disturbance zones before earthworks commence. This action will serve to restrict civil works and related operations within the Right of Way. Where sensitive ecological and social receptors exist near the DIA (school premises, medical facilities, surface water courses) the contractor with assistance from the supervising environmentalist shall be required to screen off such sites using appropriate materials.

INDIA refers to areas that will receive offsite secondary and sometimes tertiary impacts associated with project activities. The spatial dimension of the INDIA cannot be designated as a uniform dimension from project alignment. Project effects will be registered downstream of surface water courses traversing through the alignment and employment opportunities created by the project may accrue to casual Laborers originating from neighboring districts. Most social impacts including the spread of HIV/AIDs, prostitution and narcotic substance abuse shall be spread through a wider locale. Where sensitive ecosystems (wetlands and surface water courses) and social receptors (refugee settlements) exist the extent of the INDIA will take a regional perspective. However, for operational purposes the INDIA will be set to cover the boundaries of the selected towns so as to include the furthest distance in which material source areas especially rock quarries should be located to make economic sense.

2.5 DESIGN GEOMETRICS

2.5.1 ROAD DESIGN STANDARDS

The horizontal and vertical alignments of the proposed urban roads has been designed to be as close as possible to the existing yet remain in accordance with acceptable specifications for urban roads to achieve a high degree of mobility and harmony within the urban areas.

2.5.2 TYPICAL CROSS SECTION ELEMENTS

The Refugee Access road will be designated as Class III or above on the national network, while the urban roads shall take on option 5 and 6

The typical cross section elements envisaged for this classification are presented below:

1. Typical Cross Section at Cut in Existing Road Widening
2. Typical Cross Section at Cut in Virgin Terrain
3. Typical Cross Section at Cut in Virgin Terrain
4. Typical Cross Section at Fill-in Virgin Terrain
5. Typical Cross Section at Urban/Trading Section Areas (Option 1)
6. Typical Cross Section at Urban/Trading Section Areas (Option 3)

The corresponding drawing are presented below:

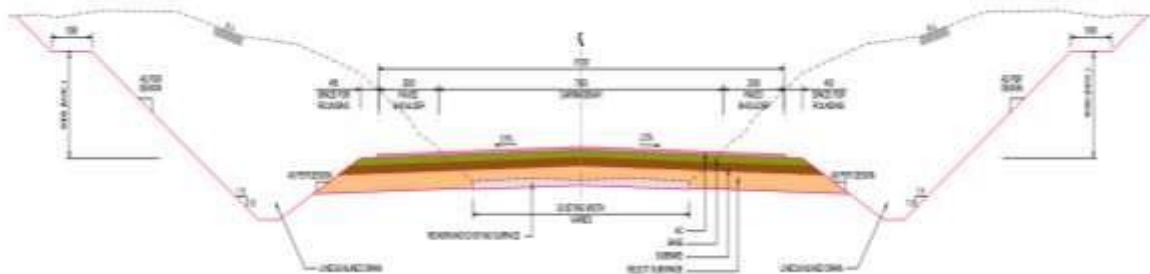


Figure 2. 1: Typical Cross Section at Cut in Existing Road Widening

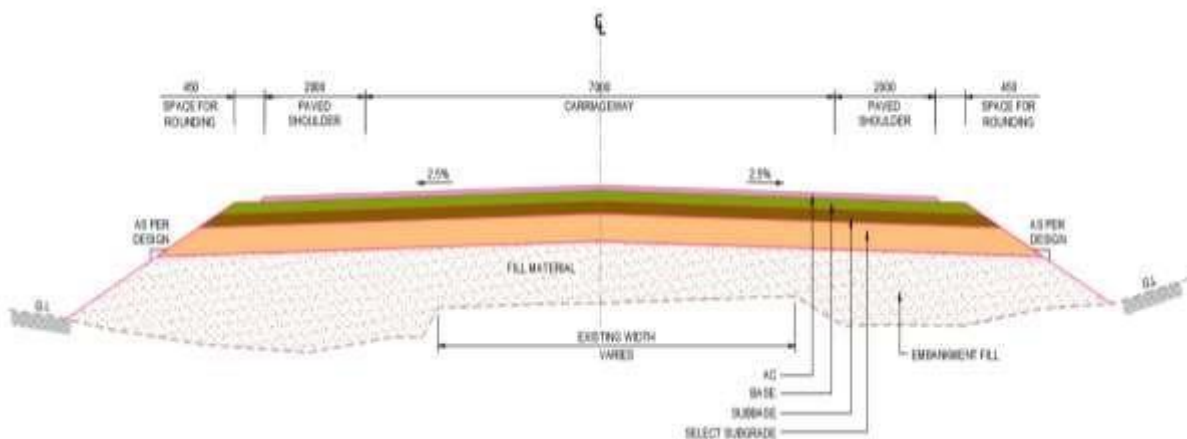


Figure 2. 2: Typical Cross Section at Fill in Existing Road Widening

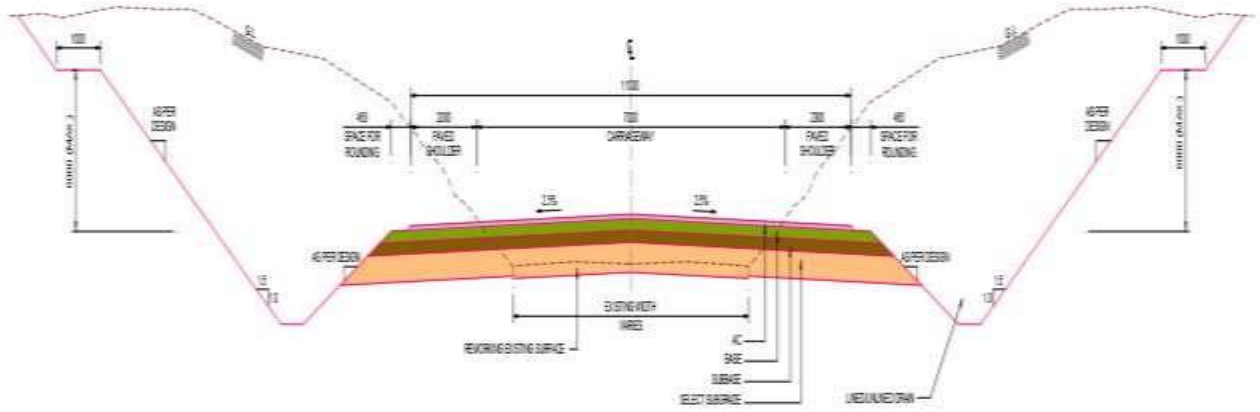


Figure 2. 3: Typical Cross Section at Cut in Virgin Terrain

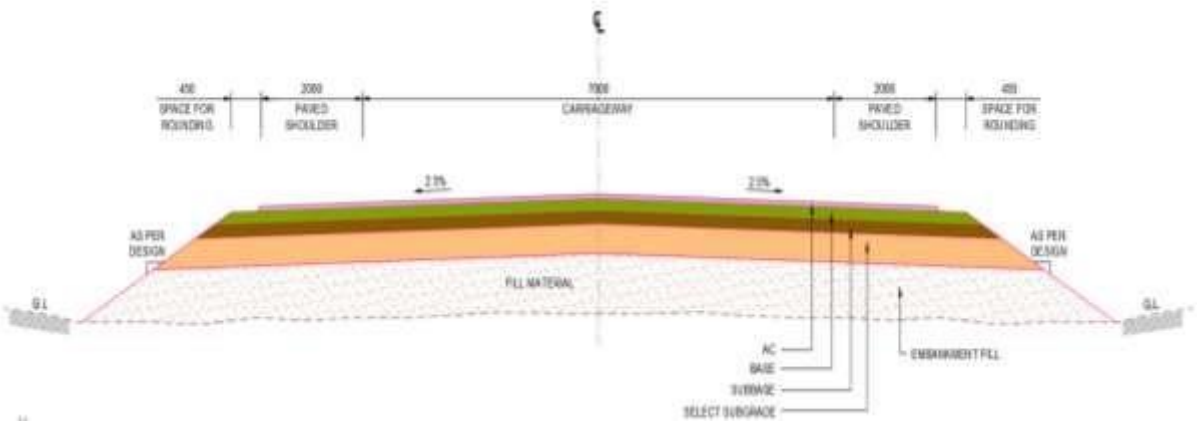


Figure 2. 4: Typical Cross Section at Fill-in Virgin Terrain

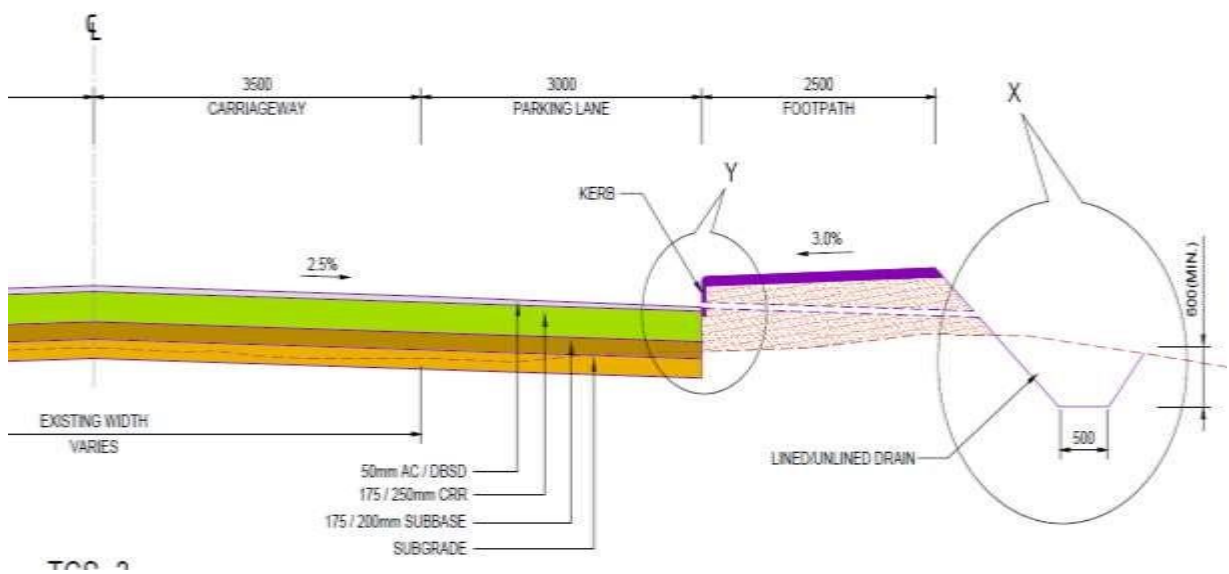


Figure 2. 5: Typical Cross Section at Urban/Trading Section Areas (Option 1)

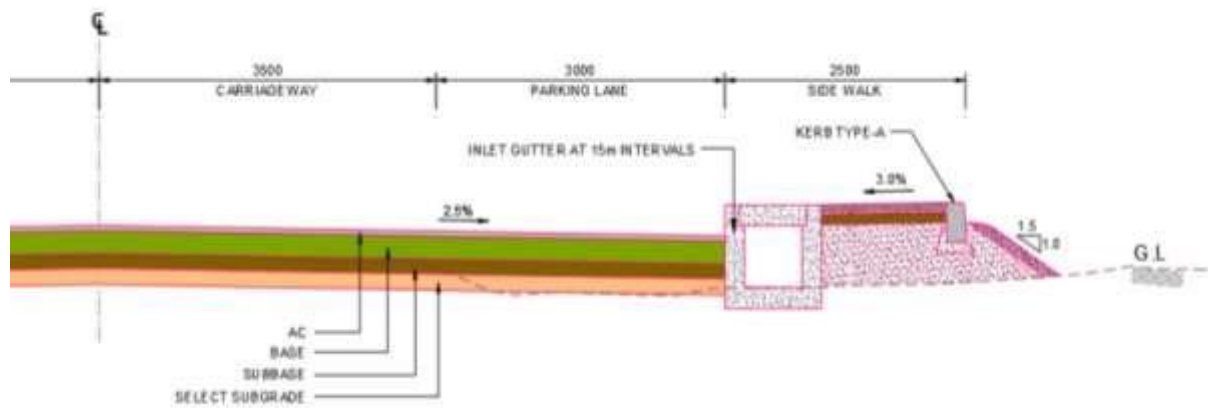


Figure 2. 6: Typical Cross Section at Urban/Trading Section Areas (Option 3)

2.5.3 PROPOSED GEOMETRIC DESIGN PARAMETERS

The proposed road upgrade will be designed so as to achieve parameters presented in the table below

Table 2. 3: Proposed design elements

Design Element	Unit	Flat	Rolling	Mountainous	Urban/Peri-Urban
Design Speed	km/h	80	70	50	50
Min. Stopping Sight Distance	m	115	95	60	60
Min. Passing Sight Distance	m	545	485	345	345
Min. Horizontal Curve Radius	m	240	185	85	100
Max. Gradient (desirable)	%	4	5.5	9	9
Max. Gradient (absolute)	%	6	7.5	11	11
Minimum Gradient in cut	%	0.5	0.5	0.5	0.5
Maximum Superelevation	%	7	7	7	4
Crest Vertical Curve stopping	K_{min}	32	22	9	9
Crest Vertical Curve passing	K_{min}	310	246	126	126
Sag Vertical Curve stopping	K_{min}	25	20	11	11
Normal Cross fall	%	2.5	2.5	2.5	2.5
Shoulder Cross fall	%	4	4	4	4
Right of Way	m	50	50	50	30

2.5.4 MATERIAL SOURCE AREAS

2.5.4.1 BORROW PITS

The current contractor is currently operating over 40 approved borrow areas within the project area, these will be the sources of much of the gravel to be used on the selected urban roads project. Should the need arise for new borrow areas, standalone assessments shall be undertaken to guide environment and social safeguard observance on the project

2.5.4.2 ROCK SOURCES

Road construction requires significant quantities of rock materials of different specifications and for various applications. The Contractor runs two licenced and approved active quarries within the project area, these will provide rock products for this project.

Table 2. 4 Location of Active Rock Quarries

SN	Name and Location	Certificate Number	Date
1	Zhongmei Yumbe Quarry	No CERT/2149/2025/1	7th January 2025
2	Zhongmei Moyo Quarry	No CERT/1947/2025/7	21 st July 2025

2.5.4.3 SAND SOURCES

The project shall require significant quantities of sand for the different civil works. The engineering design team for KYM identified potential sources of sand presented in the table below

Table 2. 5 Sand Sources

S/N	Chainage (km)	Side	Offset	Remarks
SS-01	17+300	RHS	20km	Urengere River
SS-02	59+600	RHS	0.5km	Kochi River / Kena Valley
SS-03	64+500	LHS	13.5km	Nyewa River

Source: Draft Engineering Design Report for KYM.

2.6 WATER SOURCES

Water sources were identified at the following locations. Quality suitability tests shall be carried out and regulatory permits secured before abstraction.

Table 2. 6 Water Sources

S/N	Chainage (km)	Side	Offset	Remarks
WS-01	7+600	RHS	1.5km	Urengere River
WS-02	59+700	LHS & RHS	Roadside	Kochi River / Kena Valley
WS-03	73+300	LHS	Roadside	Nyewa River
WS-04	78+800	RHS	Roadside	Wii River

2.7 CAMP SITE AND EQUIPMENT YARDS.

The contractor has established 3 work camps and equipment yards within the project area (Yumbe Main Base Camp, Koboko Mini Camp and Moyo Mini Camp). All these camps have undertaken ESIA studies and are licensed by NEMA. The Camps have also been approved by the World Bank under KYM road upgrade project.

2.8 PROJECT ACTIVITIES

The upgrading of the Road project will involve redesigning, widening and strengthening of the existing pavement and shoulders. Further construction of drainage structures will be constructed. Envisaged project activities fall into three phases: pre-construction, construction and operational phases.

Phase I Pre-construction Activities

This is a planning phase. Main activities will include:

- Feasibility studies
- Preliminary and detailed engineering design
- Traffic surveys
- Materials investigations
- Drainage design
- Road survey
- ESIA.

Phase II Construction and Decommissioning Road Construction works

The second phase marks the commencement of overt project activities many of which will have environmental and social impacts. Below is a summary of activities to be carried out

- Land clearance
- Stripping away existing wearing surface as per design specifications
- Grubbing and ripping of topsoil for the road pavement
- Earthworks involving cut and fill operations
- Excavation of gravel and soils from borrow areas
- Quarry operations including rock blasting and crushing to obtain aggregate
- Natural gravel/crushed rock base construction
- Swamp treatment using rock fill or any appropriate method
- Construction of culverts on surface water courses
- Construction on pavement seals.
- Stone pitching of drains
- Gabion construction for erosion protection
- Planting grass on side slopes/ embankments
- Reshaping of borrow pits and decommissioning them

- Construction of retaining walls where necessary on steel embankments
- Installing road furniture including traffic signs, guard rails and road markings

Phase III Decommissioning Activities

Completion of road construction will trigger decommissioning of road construction works and all auxiliary activities including borrow areas and rock quarries, asphalt plant, worker camps and equipment yards.

2.9 CONSTRUCTION PHASE RESOURCES, EQUIPMENT AND MATERIALS.

During the construction phase, the contractor will require human resources, equipment and materials to accomplish the project. Tentative project equipment and materials are presented below

2.9.1 EQUIPMENT

Equipment to be used in road construction include but are not limited to, dumper trucks, excavators, motor graders, rollers among other. Road construction equipment are classified as heavy especially earth moving equipment. While back hoe excavators and other suitable equipment will be used in excavating trenches, motor graders shall be used in a number of operation during earth works and pavement preparation (cutting, levelling, spreading etc). Dumper trucks shall be used to move materials, cut to spoil and other debris off the site to dump areas whereas rollers will be required in compacting operations. Other equipment will include loaders, bitumen spreaders and multiple smaller equipment.



Motor Grader



Wheel Loader



Bull dozer



Smooth Wheel Compactor

Plate 2. 4: Typical road construction equipment

2.9.2 HUMAN RESOURCES

Employment of labour is anticipated including skilled and non-skilled. The anticipated quantities of human resource are not known at this point in time but shall include civil engineering professionals, general labour, equipment operators, laboratory technicians, hospitality and catering service professionals, administrators and managers among others. It is likely that local residents shall mostly be employed to do casual jobs depending on their skills set. It is expected that the project will employ about 600 people including professional, skilled, semi-skilled and unskilled staff though staff may be changed with time and place of operation. The Employment Act (2006), the Workers Compensation Act 2000, Labour Disputes (Arbitration Settlement) Act 2006, Labour Unions Act 2006 and the Occupational safety and health Act 2006 will need to be observed.

CHAPTER 3 METHODOLOGY

3.0 INTRODUCTION

This section describes the methodology that have been used to document both the biophysical and socioeconomic baseline conditions and further assess and predict the significance of impacts resulting from the proposed selected town roads upgrade. The study has used conventional methods to document baseline conditions including documentary review (review of design reports, Statistical abstracts from UBOS, District Development Plans, National Development plans and various pieces of legislation). Field surveys have been carried out to target baseline information on biodiversity, air and water quality, noise, physical cultural resources and soils. Social economic surveys have been mounted to obtain data on various demographic parameters, access to infrastructure and services, land ownership aspects of gender and vulnerability.

3.1 DOCUMENT REVIEW.

To gain a clear insight on baseline parameters and project characterization, various documents have been reviewed at the scoping stage and further reviews shall be carried out. Reviewed documents include those on policy and regulatory pronouncements, project design and information/data on baseline conditions: Documents so far reviewed address the following themes:

- Relevant policies and legislation of Uganda
- World Bank Environment and Social Framework and associated Environment and Social Standards.
- Relevant International covenants
- Draft Engineering Design Report
- Environmental and Social Impact Assessment Report for Koboko – Yumbe – Moyo road
- District Development Plans (Koboko, Yumbe and Moyo)
- National and District level statistics contained in UBOS national census 2024 and published statistical abstracts. Abstracts on agricultural production data (crop and livestock).
- Uganda Museum archival documents on Physical Cultural Resources
- Published documents on biodiversity of the northern region (both fauna and flora)
- Analysis of images and thematic topographic maps covering the project districts with specific reference to towns

3.2 SOCIO-ECONOMIC SURVEY.

A socioeconomic survey was undertaken to gain insight into household and community socio-economic conditions along road development corridor.

3.2.1 SAMPLING APPROACH

Purposefully selected sites along the selected roads were sampled to obtain data on household characteristics. The table below presents the selected roads and sampled points.

Table 3.1 Household data Sampling Points

Moyo District	Length (km)	Coordinates			
		Zone	Easting	Northing	
Moyo Town Council					
Okudi Road	0.73	36N	358401	404100	1
Okudi Road	0.73	36N	357820	404315	0
Fr. Bilbao Road	0.18	36N	357876	404167	0
Fr. Bilbao Road	0.18	36N	357979	404322	1
Moyo Town Council PS Road	0.36	36N	358389	404475	0
Moyo Sec. Sch. Road	0.94	36N	359595	404877	1
Addi Gabriel Madra Road	0.08	36N	358201	404005	0
Addi Gabriel Madra Road	0.08	36N	358111	404037	0
Kerelu Crescent Road	0.16	36N	358181	403963	0
Kerelu Crescent Road	0.16	36N	358062	404003	0
Besia Road	1.04	36N	358425	403739	1
Besia Road	1.04	36N	357530	404041	0
Lowi Quarter Road	0.73	36N	358477	403853	1
Lowi Quarter Road	0.73	36N	358056	403271	0
Park View Road	0.34	36N	358249	403609	1
Park View Road	0.34	36N	358211	403959	0
Mary Mania Road	0.13	36N	358207	403784	0
Mary Mania Road	0.13	36N	358080	403759	0
Dr. Moriku Joyce Kaducu Road	0.11	36N	358108	403772	1
Dr. Moriku Joyce Kaducu Road	0.11	36N	358108	403874	0
Vukoni Jimmy Okudi Road	0.1	36N	357735	404040	0
Vukoni Jimmy Okudi Road	0.1	36N	357731	403980	0
Prof. Dranzoa Christine Road	0.1	36N	357936	403938	0
Prof. Dranzoa Christine Road	0.1	36N	357951	404018	0
Peter Iku Dolo Road	0.26	36N	358685	404145	1
Peter Iku Dolo Road	0.26	36N	358649	403814	0
Access to the new district h/qtrs	0.1	36N	354245	402641	

Access to the new district h/qtrs			354203	402722	
Koboko Town Council					
Alli-Kenyi to Birijaku customs	2.7	36N	270823	377731	2
Alli-Kenyi to Birijaku customs	2.7	36N	273327	377234	2
Transport Road	0.6	36N	273268	377789	0
Transport Road	0.6	36N	273228	377244	1
Apa roads		36N	271751	377490	0
Apa roads		36N	273227	377425	0
Samuel Baba Road	0.7	36N	273418	377189	1
Samuel Baba Road	0.7	36N	273360	377699	1
Lurujo Road		36N	273537	376881	1
Lurujo Road		36N	274441	375873	0
Gen. Katumba Wamala Road		36N	273382	378112	0
Gen. Katumba Wamala Road		36N	273557	377999	1
Yumbe District					
Lori - Bidibidi Road	15	36N	312833	388707	2
Lori - Bidibidi Road	15	36N	326371	385275	2
Ring Road	5.6/6.4	36N	303569	383041	1
Ring Road	5.6/6.4	36N	305006	383644	1

3.2.2 METHODS OF DATA COLLECTION AND MANAGEMENT

- **Questionnaires**

A combination of structured household questionnaires and interviews have been used to generate household demographic data, livelihood activities, distance to nearest service centers (education, health, administrative), gender relations, migration patterns, ethnicity among other parameters. Basic descriptive analysis of collected data will be carried out and presented in tabular form to aid description of various parameters.

- **Interviews**

Structured interviews with selected opinion drivers within the communities have been conducted to supplement information obtained through household questionnaires. Identification of respondents was based on onsite scouting for local opinion drivers and snowballing sampling methodology. Aspects on gender, livelihoods, ethnicity and migration have been investigated mainly through interviews. Structured interviews were held with key focal individuals within the District and Town Council Local Governments responsible for policy mandates. Lower level officials were interviewed to gain insight into local level development plans and implementation strategies.

- **Focus Group Discussions**

Focus Group discussions have been carried out during the first field reconnaissance. These will be enhanced within the selected clusters where interviews and community meeting

are planned. FGD are planned to gain insight into gender relations and aspects of vulnerability.

3.3 COMMUNITY MEETINGS

Preliminary community engagements have been held on the selected roads within the towns. These will be highly interactive sessions characterized by project presentations from the assessment team followed by discussions on issues, concerns and fears raised by the project. An open free flow discussion will be encouraged to enable the team gain insight into community needs regarding project design and mode of implementation. The Stakeholder Engagement Plan gives details.

3.4 INTERACTIVE SESSIONS WITH DISTRICT LOCAL GOVERNMENTS

Interactive sessions with District Local Governments have taken place and more are planned. A two-tiered approach has been adopted where the district /municipal political leadership and technical personnel form the first tier to address district policy concerns and needs regarding the project and its potential impacts and risks. The second tier is comprised of all lower level units traversed by the selected roads. Sessions are basically dialogue sessions beginning with presentations from the team followed by discussions.

3.5 PCR ASSESSMENT

Preliminary assessment on all selected roads for archeological, living culture and Paleontological features has been undertaken, further studies will be carried out during the full ESIA studies. Documentation of all physical cultural resources both communal and individual shall be done following guidelines from the Department of Museums and Monuments (DMM) in Ministry of Tourism, Trade and Wildlife Antiquities. Physical Cultural Resources are defined in the guidelines so as to include sites, structures and remains of archaeological, historical, religious, cultural or aesthetic values. They include burial sites, sites of religious or spiritual significance, pre-historic sites, historical sites, cave sculptures, architectural sculptures, cave or wall paintings, monumental architecture, indigenous architecture, historic settlements, cultural landscapes, historic parks and monuments, and trade route monuments and remains.

PCR will be studied using various methods including;

- i) Consultations with communities along the selected roads to establish living cultural sites;
- ii) Sampled Test-pit excavations for archaeological features at sites that show sensitivity;
- iii) Encounter surveys for Paleontological features and living cultural sites.
- iv) Literature review of the gazette PCR sites by DMM

3.6 BIODIVERSITY ASSESSMENT (FAUNA)

The proposed selected roads for upgrade are located within urban areas though some traverse sites that hold remnants of anthropogenically modified landscapes. The approach and methods below have been applied to areas of sensitivity including unsettled sections and periodically flooded sites among others. The scoping report has identified potential sampling sites contained in appendix 1 of this report.

3.6.1 BUTTERFLIES

The main method used was the sweep-netting. Butterflies were sampled using a sweep-net method as used by Kasangaki et al (2012). The method involves randomly moving through the selected sampling site within the project area, sweeping the net back and forth to capture the seen butterfly

On anticipation of a capture, the net is flipped over, with the bag hanging over the rim, trapping the insects. Trapped butterfly will be gently removed from the net for identification. Once identified, the individual will be released. Individuals whose identity is not known will be photographed and individual placed in collection envelopes, details of the GPS coordinates, Time and the photos will be written on the labels. All trapped butterflies will be identified to species level.

3.6.2 HERPETOFAUNA (AMPHIBIANS AND REPTILES)

Three main methods were employed to sample the herpetofauna, as described by Heyer et al, 1994; Fellers and Freel, 1995; Halliday, 1996; and Olson, et al, 1997.

- ✓ **Visual Encounter Surveys (VES):** The method constitutes moving through a habitat watching out for, and recording surface-active herpetofauna species. VES will be complimented by visual searches, by examining under logs, leaf litter, in vegetation, and crevices. Species encountered will be recorded and where possible photographed.
- ✓ **Audio Encounter Surveys (AES):** This method uses the species-specific calls / sounds / advertising calls made by breeding males. The identity of the amphibian species heard calling and their numbers will be recorded.
- ✓ **Dip netting:** Using a dip net, ponds, pools, and streams and other water collection points were dip netted. Adult amphibians and tadpoles encountered will be recorded.
- ✓ **Opportunistic Encounters:** Herpetofauna species encountered opportunistically while moving in the project area will be recorded.

Apart from individuals heard calling, species encountered will be handpicked, identified, and where possible photographed and released at the point of capture. Identification followed field guides by Sprawls, S. et al. (2002), and Bill Branch (2005).

3.6.3 BIRDS

- **Timed species Counts (TSC)**

Timed Species count method (Bibby *et al* 2000) were used at selected sites in the project area. At each of the sites, bird species seen and their numbers were recorded. Each TSC lasted one hour, during which time all bird species seen or heard were listed in order of detection. Additional records will be made of species found present in the area outside the time of the count. Observations will be made using a 10 x 40 binocular. Efforts will be made to sample the different habitats represented in the project area. Sampling will be conducted in the early morning and towards the evening. All Identifications will be made by reference to Stevenson and Fanshawe (2002) and supported by the Uganda Bird checklist (Nature Uganda 2012).

The threat categories and the habitat type of the birds will be noted using the following categories:

Threat Categories

- ✓ G-CR-Globally Critical
- ✓ G-EN-Globally Endangered
- ✓ G-VU-Globally Vulnerable
- ✓ G-LR/nt-Globally Lower Risk, near threatened
- ✓ G-DD-Globally Data Deficient
- ✓ G-RR-Globally Range Restricted
- ✓ R-CR-Regionally Critical
- ✓ R-EN-Regionally Endangered
- ✓ R-VU-Regionally Vulnerable
- ✓ R-NT-Regionally Near-threatened
- ✓ R-RR-Species of regional responsibility

Habitat

Habitat-type divisions using Britton (1980) and *Birds of Africa* (1982-1992) will be adopted as follows:

- ✓ FF - Forest specialists
- ✓ f - Forest visitors
- ✓ OM - Open habitat migrants
- ✓ FFH - Highland forest specialists
- ✓ fH - Highland forest visitors
- ✓ WM - Widespread migrants
- ✓ FFL - Lowland forest specialists
- ✓ fL - Lowland forest visitors
- ✓ FM - Forest generalist migrants
- ✓ F - Forest generalists
- ✓ A - Aquatic/swamp species
- ✓ fM - Forest visitor migrants
- ✓ FH - Highland forest generalists
- ✓ - Open habitat species
- ✓ AM - Aquatic migrants
- ✓ FL - Lowland forest generalists
- ✓ OH - Highland open habitat species
- ✓ W - Widespread species

3.6.4 MAMMALS

The mammals were surveyed in the project area using three methods:

- 1) **Direct observation/opportunistic encounters:** All mammals seen or opportunistically sighted while moving in the project area were identified, counted and recorded;
- 2) **Use of footprints and/or dung or calls;** Mammal species whose footprints and dung can be recognized were recorded for their presence;
- 3) **Use of break back traps;** Two trap lines were set-up in each project site, each with ten traps. The traps were left in place for one night before they are moved to a different survey site. This method was used to sample small mammals.
- 4) **Local consultations:** Residents along the project area /road will be consulted about the availability of mammal species in the area.

Mammal identifications was based on Kingdon (1974), Delany (1975) and Kingdon *et al.* (2013). The mammal surveys will be conducted in the different habitat types in the project area.

3.7 BIODIVERSITY ASSESSMENT (FLORA)

The selected roads served as a transect line to identify ecologically sensitive sites. Sampling points were selected at sites within the identified ecologically sensitive zones where all the identified plant species will be documented. Nested quadrats will be established at sampling points. Opportunistic sampling will also be made in case of any IUCN registered species. Appendix 1 presents identified sites for sampling.

Site specific vegetation descriptions and classifications were determined based on species dominance and floral features such as herb, shrub and tree land coverage at each sampling point. At the sampling points, considerations of 25 x25 meters plots for woodlands & forest; 10 x 10 meters shrubs, 1x1 herbs/grasses for swampy & marshy vegetation, thickets and bushy vegetation will be adopted. These dimensions will be modified to match identified patches, where patches are small appropriate dimensions will be applied.

Plant species will assessed against the IUCN red data lists (IUCN 2026) and nationally threatened species for Uganda (WCS, 2016) to determine their conservation significance, and where such species will be encountered geo-referenced records will be noted. Also of interest will be the occurrence of invasive species in or near the project area. Photographic records of the vegetation type and ecologically sensitive features will be taken.

Species of plants that will not be easy to identify in the field will be collected as voucher specimens for subsequent identification at Makerere University Herbarium. Literature reviews will be conducted to support field finding

3.8 NOISE AND VIBRATION ASSESSMENT

A few sensitive receptors were identified during the scoping phase. The sensitivity of these receptors, place and duration will be considered for selecting noise monitoring locations. Noise level will be measured in Leq (dBA) at each of the locations with reference to the National Environment (Noise and Vibration) (Standards and Control) Regulations, 2013.

Table 3. 2 Maximum Permissible Noise Levels for Road Construction

Day & Time	Leq Db(A)*1	Leq Max Slow Db (A)
Monday to Friday 07:00 to 19:00 hrs	70	80
Monday to Friday 19:00 to 22:00 hrs	60	65
Saturday 08:00 to 16:30 hrs	65	75
Sunday and Public Holidays 08:00 to 16:30 hrs	60	52

: Unit in decibels on the A scale for quiet sounds

Additional Permissible Limits of Noise for Construction

Activity	Maximum Noise Level Permitted (Leq) in Db (A)*1
Work requiring a large amount of mental concentration	55
Work requiring verbal communication or great accuracy and attention	85
Any noise work setting	85

*1: No matter how short a time, a worker exposed to noise levels greater than 85dBA should wear hearing protectors and no worker should enter an area where noise levels exceeds 140 dBA.



3.9 AIR QUALITY ASSESSMENT

Air quality monitoring will be conducted at several locations in the study area. These locations shall be selected on the basis of potentiality to pollute and sensitivity of the areas. The sampler will be run continuously for 10 hrs. at each of the locations. The major sampling parameters will be NH₃, SO₂, NO_x, PM_{2.5}, PM₁₀, O₃ and CO. This will be done using an Aeroqual Air Sampler. Moreover, field investigation will be used to identify point sources in the study area. All information related to the emission of gaseous pollutants will be collected from the selected sensitive receptors. These will be compared with the National Air Quality Standards 2024

No.	Pollutant	Time-weighted Average	Standard for Ambient Air
	Carbon monoxide (CO)	24-hour	7 mg/m ³
		8-hour	10 mg/m ³
		1-hour	35 mg/m ³
	Hydrogen Sulphide (H ₂ S)	1-hour	42 µg/m ³
	Ozone (O ₃)	1-hour	235 µg/m ³
		8-hour	120 µg/m ³
	PM _{2.5}	Annual average	25 µg/m ³
		24-hour	35 µg/m ³
	PM ₁₀	Annual average	40 µg/m ³
		24-hour	60 µg/m ³
	Sulphur dioxide (SO ₂)	1-hour	50 µg/m ³
		24-hour	20 µg/m ³
	Nitrogen dioxide (NO ₂)	Annual average	30 µg/m ³
		24-hour	50 µg/m ³
	Total Volatile Organic Compounds (VOCs)	24-hour	600 µg/m ³



3.10 WATER QUALITY

Baseline water quality measurement is important for continuous monitoring to keep track on the changes in water quality if any. Samples will be collected from a stream crossing Aliopa Road in Koboko and A t the following point.

Table 3. 3 Water Quality Sampling Points

SN	Stream	Coordinates	Road	District
1	Apa Seasonal wetland / stream	36N 0271352, 0377553	Ali Kenyi	Koboko
2	Apa valley stream	36N 0272736, 0377289	Ali Kenyi	Koboko
3	Sinyani stream	36N 0274004, 0376391	Lurujo	Koboko
4	Leze stream	36N 0358329,0403804	Besia Road	Moyo
5	Fodia stream	36N 0358686, 0403879	Peter Iku Dolo Road	Moyo

The water parameters to be tested are as described in the table below

Table 3. 4 Environmental Standard of Water

Survey Category	Survey Item	Maximum Permissible Limits	
		Standards for discharge*1	Standards for potable water *2
Physical Items	Temperature	20-35°C	25°C
	Colour	300 True Colour Units (TCU)	15 True Colour Units (TCU)
	BOD5	50mg/l	-
	COD	100mg/l	-

Survey Category	Survey Item	Maximum Permissible Limits	
		Standards for discharge*1	Standards for potable water *2
	Total Suspended Solids (TSS)	100mg/l	-
	Electric Conductivity (EC) 25°C	-	2500µS/cm
Chemical Items	pH	6.0 – 8.0	6.5 – 8.5
	Iron	10 mg/l	1mg/l
	Ammonia	10mg/l (Ammonia Nitrogen)	1mg/l
	Nitrogen Total	10mg/l	-
	Phosphate Total	10mg/l	-
Organic Chemical items	Oil and Grease	10mg/l	-
	Detergent	10mg/l	-
	Phenols	0.2mg/l	-
	Coliform Organisms	10,000 counts/100ml	Heterotrophic plate count (max. 1% of samples): 10,000 counts/1000ml Total Coliform bacteria count: 100/100ml

Source:

*1: The National Environment (Standard for discharge of effluent into water or on land) Regulations.

*2: Uganda Standard Drinking (potable) water – Specification, 2008. Class II (untreated water like borehole and springs)

3.11 IMPACT IDENTIFICATION AND ANALYSIS

Impacts were identified based on a checklist that formed the basis for detailed field investigations involving site observational studies, structured interviews and professional judgment. Identification of probable biophysical impacts was based on observation, site measurements, professional judgment and reference to existing literature.

3.12 DETERMINING IMPACT SIGNIFICANCE

Evaluation of impact significance involved evaluating identified risks and impacts by first determining the magnitude based on defined extent, duration and sensitivity, as the

evaluation criteria. The level of risk or impact was then assessed against the likelihood of occurrence to determine its level of significance.

Table 3. 5 Rating Impact Magnitude

Score	Biophysical Environment	Socio-economic Environment
1	Very Low (the impact on the environment is not detectable)	There is no perceptible change to people's health, wellbeing, or livelihood
2	Low (the impact affects the environment in such a way that natural functions and processes are not materially affected)	People/communities are able to adapt to the impact with relative ease and maintain pre-impact livelihoods
3	Moderate (where the affected environment is altered but natural functions and processes continue, albeit in a modified way where natural functions and processes are altered however it will temporarily cease/regenerate)	People/communities are able to adapt to the impact with some difficulty and maintain pre-impact health, wellbeing, and livelihood status but only with a degree of support
4	Very high (where natural functions and processes are altered that it will permanently cease)	Affected people/communities will not be able to adapt to changes while continuing to maintain pre-impact health, wellbeing, or livelihood.

Table 3. 6 Rating of probability of occurrence of risks and impacts

Score	Likelihood of occurrence (Probability)	Description
1	Not likely	The possibility of the impact occurring or materializing is very low as a result of design or baseline characteristics
2	Low	There is a possibility that the impact will occur, however the chance is much less than 50 percent
3	Medium	The chance that the impact will or will not occur is the same.
4	High	The impact will occur regardless of the implementation of any prevention or corrective actions

Significance rating

The level of significance of impacts was then assessed by cross tabulation of the magnitude of impact and its Likelihood of occurrence as presented in the matrix below

Significance	Likelihood of Occurrence			
	Rare	Possible	Likely	Certain

		1	2	3	4	
Impact Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

The descriptive indicators of level of significance are presented in table 4.3 below

Table 3.7 Criteria for scaling impact significance

Impact scale	Descriptors
Major	<ul style="list-style-type: none"> a. Irreversible, widespread, covering local, regional, and global indirect influence area. b. Will lead to high mortality of important endangered species on site and off site. c. Exceeds limits set by environmental standards both national and international. d. Major contribution to known global environmental problem with tangible effects. e. Causing widespread nuisance both onsite and offsite. f. Leading to the release of hazardous wastes which lethal effects in the environment. g. Permanent loss of livelihoods for entire community. h. Leaves permanent and irreparable scars on the landscape.
Moderate	<ul style="list-style-type: none"> a. Noticeable effects on the environment which are reversible over the long term b. Localized degradation of resources restricting potential for further usage c. Limited effects on locally or globally endangered species with no long-term effects on their reproduction and migratory behaviors. d. Increased pollution of water bodies in the short term but drops with time e. Noise and air pollution above maximum levels accepted in the environment. f. Disruption of livelihoods in the short term but no long-term effects. g. Leads to a repairable scar on the landscape but repairable over time
Minor	<ul style="list-style-type: none"> a. Noticeable effect on the environment but returning naturally to original state in the medium term.

	<ul style="list-style-type: none"> b. Minimum degradation of resources but does not constrain future use c. Disruption of the behavior of threatened/endangered species but returns to normal in the short term. d. Release of periodic particulate matter that is circulated in the short term e. Intermittent noise nuisance f. Changes in water and air quality levels not above maximum acceptable limits.
Negligible	<ul style="list-style-type: none"> a. No noticeable or limited local effect on the biophysical environment that rapidly returns to its original state. b. Unlikely to lead to any changes in ambient air and water quality. c. Unlikely to affect resources in any noticeable way. d. No anticipated effect on livelihoods e. Will not change the landscape in any way.

4.0 POLICY, LEGAL AND INSTITUTIONAL ARRANGEMENTS.

4.1 POLICIES

4.1.1 THE NATIONAL ENVIRONMENT MANAGEMENT POLICY, 1994

This policy aims to promote sustainable economic and social development mindful of the needs of future generations and EIA is one of the vital tools it considers necessary to ensure environmental quality and resource productivity on long-term basis. It calls for integration of environmental concerns into development policies, plans and projects at national, district and local levels. Hence, the policy requires projects or policies likely to have significant adverse ecological or social impacts to undertake an ESIA before implementation. This is also reaffirmed in the National Environment Act, Cap 181 which makes ESIA a requirement for eligible projects including road upgrade projects. These particular selected roads upgrade project shall be operated within the requirements of this policy.

4.1.2 THE NATIONAL WATER POLICY 2021

The National Water Policy guides project activities for all water abstracted for quarry activities. Among the many issues addressed by this policy is preserving water quality for all users. Road works have the potential to pollute surface water and further reduce quantity to downstream communities. The policy therefore streamlines work methods at on road worksites to avoid runoff from contaminating downstream surface water.

4.1.3 UGANDA WILDLIFE POLICY, 2014

Ownership of wildlife (plant and animal) existing in its wild habitat is vested in Government on behalf of, and for the benefit of the people of Uganda, this is consistent with the constitutional position in article 237(2b). Any activity that may have an impact on the wild life is subject to an ESIA as contained in the National Environment Act Cap 181.

4.1.4 NATIONAL GENDER POLICY 2007

The Uganda Gender Policy mandates the Ministry of Gender, Labor and Social Development and other line Ministries to mainstream gender in all sectors. Thus, in the context of the road sector, it aims to redress the imbalances which arise from the existing gender inequalities and promotes the participation of both women and men in all stages of the project cycle, equal access to and control over significant economic resources and benefits. Road construction impacts gender either positively or negatively. These activities may constrain labour availability or access to production resources.

4.1.5 HIV/AIDS POLICY IN THE WORLD OF WORK, 2007

The Uganda National HIV/AIDS Policy (2007) requires all Government Ministries to develop specific policies for guiding the process of mainstreaming HIV/AIDS activities in respective

sectors. The policy obliges developing entities to mainstream HIV/AIDS interventions into their planned development interventions. MoWT developed the HIV/AIDS policy for the road sector based on the premise that whereas some road-sector activities have been proved to be major conduits for transmission of HIV/AIDS, others directly and indirectly contribute to the fight against the pandemic. Road construction projects are associated with high incidences of illicit sexual activity.

The goal of the policy is to guide mainstreaming of HIV/AIDS activities so as to reduce prevalence of HIV infection, provide care and support to infected and affected persons and to mitigate effects of HIV/AIDS in the sub-sector. Specific objectives of the policy are to:

- Reduce vulnerability and risk of HIV transmission in the roads sub-sector;
- Mitigate effects of HIV/AIDS in the roads sub-sector; and
- Improve road sector's capacity to respond to HIV/AIDS pandemic.

4.1.6 NATIONAL LAND ACQUISITION, RESETTLEMENT AND REHABILITATION POLICY, 2018

The main piece of legislation that regulate compensation and resettlement issues, are the Constitution of Republic of Uganda and the Land Act. The existing legislation emphasizes adequate, fair and prompt compensation. MoWT Resettlement/Land Acquisition Framework provides that:

- Compensation should be aimed at minimizing social disruption and assist those who have lost assets as a result of a project to maintain their livelihoods. In accordance with Ugandan laws and standards, a disturbance allowance is to be provided to assist the project affected individual or family to cover costs of moving and locating to a new holding.
- Community infrastructure must be replaced and ideally be improved in situations where it was deficient.

4.1.7 OCCUPATIONAL HEALTH AND SAFETY (OHS) POLICY (2008)

The OHS Policy Statement is guided by the Constitution of the Republic of Uganda, International labour and health conventions, and national sectoral policies related to labour and working conditions. The policy seeks to:

- 2 Provide and maintain a healthy working environment.
- 3 Promote safe work and management practices.
- 4 Enhance worker productivity

The OHS policy shall guide MoWT in streamlining work methods, equipment and protection of personnel. The policy will guide working conditions including hours of work, the provision and use of Personal Protection Equipment, workers' rights and safe work practices among others.

4.1.8 THE NATIONAL POLICY FOR THE CONSERVATION AND MANAGEMENT OF WETLAND RESOURCES (1995)

The overall goal of this policy is to maintain an optimum diversity of uses and users and consideration of other stakeholders when using wetland resources. The objectives of this policy include; establishing the principles by which wetland resources can be optimally used now and in future; to end practices, which reduce wetland productivity; maintaining the biological diversity of natural or semi natural wetlands; maintaining wetland functions and values; and integrating wetlands concerns into the planning and decision making of other sectors. This policy outlines guidelines for wetland resource for developers. Road Construction activities have to adhere to this policy requirement and undertake proper of sites located near a wetland.

4.19 THE UGANDA NATIONAL CULTURE POLICY, 2006

The Policy provides strategies to enhance the integration of culture into development. These strategies include advocating for culture, ensuring capacity building, ensuring research and documentation, promoting collaboration with stakeholders, and mobilizing resources for culture. These strategies are an integral part of the Social Development Sector Strategic Investment Plan (SDIP) whose mission is to create an enabling environment for social protection and social transformation of communities. Cultural leaders and local leaders need to be involved and consulted during the ESIA process for the project so that they can help identify the cultural treasures of people in the area such that they are taken into consideration in the project implementation process.

4.2 LEGISLATION

4.2.1 THE CONSTITUTION OF THE REPUBLIC OF UGANDA 1995

The Constitution guarantees a health environment to all Ugandans and requires that development projects be implemented without endangering human health and the environment. The quarry works are to be undertaken while ensuring safe and healthy environment is maintained as provided for in the Constitution.

The Constitution of Uganda is crucial in guiding land acquisition processes by protecting property rights and ensuring fair procedures. The Constitution under Articles 26 (Rights to property) and Articles 237 (Land ownership) requires that land acquisition ensures fair and adequate compensation, and the land tenure systems and ownership rights should be respected. It further provides for environmental protection whereby the land acquisition balances public interests and environmental sustainability.

4.2.2 THE NATIONAL ENVIRONMENT ACT CAP 181

The National Environment Act, Cap 181 is the most important legal instrument in Uganda with respect to environmental management, providing for an institutional framework through establishment of the National Environment Management Authority (NEMA). It also specifies management measures, addresses pollution control and stipulates mechanisms for enforcement of the law. The Fourth and Fifth Schedules of the Act list projects to be considered for ESIA. Schedule 4 listed projects that require Project Briefs (ESMPs) to be prepared whereas Schedule 5 lists projects for which ESIA is mandatory, including Scoping.

4.2.3 THE OCCUPATIONAL SAFETY AND HEALTH ACT 2006.

The Occupational Safety and Health (OSH) Act 2006 replaces the Factories Act (1964). The Act provides for the prevention and protection of persons at all workplaces from injuries, diseases, death and damage to property. The OSH Act covers not just the 'factory' but also any workplace where persons are employed and its provisions extend not just to employees but to the self-employed and any other persons that may be legitimately present in the workplace who may be exposed to injury or disease.

Employers must provide for the protection of workers from adverse weather, provision of a clean and healthy work environment, sanitary conveniences, washing facilities, First Aid and facilities for meals. The Act provides for safe access to the workplaces and safe work practices.

In Section 95, the Act requires employers to take preventive measures including administrative and technical actions to prevent or reduce contamination of working environment. Section 96 requires provision of material safety datasheets (MSDS) containing essential information regarding identity of chemicals, their hazards, safety precautions and emergency procedures. In section 97 an employer is required to ensure that containers of hazardous chemicals are labeled and appropriate chemical data sheets are available in the workplace.

Clearly, this law will apply to occupational health and fire safety risks associated with operation of equipment including handling of explosives at the quarry.

4.2.4 PUBLIC HEALTH ACT, CAP 281

This Act aims at avoiding pollution of environmental resources that support health and livelihoods of communities. The Act gives local administrative units authority (Section 103) to prevent pollution of watercourses in interest of public good.

For the implementation of quarries, the provisions of this Act are relevant for inspection and any other machinery and workers work conditions. Road construction activities will take all possible mitigations to make sure that all impacts to humans and the environment are avoided and where not possible or in case of accidents, there will be compensation.

4.2.5 MINING ACT, 2020

Activities at the stone quarry and rock crusher involve open cast mining. Blasting and excavation of rocks will take place. Requirements under Part XI for the Protection of the Environment under the Mining Act 2020, are therefore, relevant. Such requirements include Environmental Impact Assessment and Audits and Environmental standards for the prevention and minimization of pollution of the environment, and waste management. Section 110 (2b) gives guidance on restoration activities. It provides that the environment restoration plan shall include a detailed timetable for accomplishment of each major step to be carried out under the restoration plan which may include reinstatement, grading, re-vegetation, reforestation and contouring of disturbed land; the filling in, sealing, or fencing off of excavations, shafts and tunnels.

4.2.6 WATER ACT, CAP 152

The objective of the Act is to enable equitable and sustainable management, use, and protection of water resources of Uganda through supervision and coordination of public and private activities that may impact water quantity and quality. The Act provides for the use, protection and management of water resources and supply in Uganda. The Water Resources Regulations of 1998 established under this Act stipulates a requirement to apply for a permit to construct, own, occupy or control any works on or adjacent the land as per Regulation 10. The Act also aims to control pollution of water resources (Sections 20 and 31). This Act will specifically be applicable to the following aspects of the proposed quarry project:

- Water abstraction for sub camp use and for wet crushing.

4.2.7 EXPLOSIVES ACT, CAP 298

This Act regulates the use and the management of explosives for civil purposes. Under this Act, explosives are to be kept at a site approved by the Ministry of Internal Affairs (MoIA) and can only be transported to the blast site under Police escort. Charging of explosives and blasting are carried out under Police supervision. For stone quarrying, explosives will be used, provisions of this Act will be relevant to this project and the contractor will take due diligence to observe the requirement of this Act.

4.2.8 THE WILDLIFE ACT CAP 200

In order to support sustainable utilization of wildlife for the benefit of the people of Uganda, the purpose of the Act among others is to provide for the conservation of wildlife throughout Uganda so that the abundance and diversity of their species are maintained at optimum levels commensurate with other forms of land use. The Act guides construction operations to ensure protection of any wildlife resources encountered during works.

4.2.9 LOCAL GOVERNMENTS ACT, CAP 243 1997

This Act aims at avoiding pollution of environmental resources that support health and livelihoods of communities. The Act gives local administrative units authority (Section 103) to prevent pollution of watercourses in interest of public good. On road construction projects, the provisions of this Act are relevant since they require inspection of quarry tunnels and pits together with equipment on site. Implementation of safety and health measures is also a requirement. The Contractor is required to ensure that all mitigation measures to avoid impacts and risks associated with the quarries and borrow areas are eliminated or compensated. The Act also mandates local leaders and their governments to ensure management of natural resources and that they are consulted during the ESIA and the entire development process

4.2.10 LAND ACT, CAP 227

The Land Act, Cap 227 of 1998 provides for the tenure, ownership and management of land. Under Section 44 the Government or the local government shall hold land in trust for the people and protect natural lakes, ground water, natural streams, wetlands and any other land reserved for ecological purposes for the common. The Act addresses landholding, management, and control and dispute resolution in matters related to land. Land acquisition has been guided by this act.

4.2.11 THE LAND ACQUISITION ACT, 1965

This Act provides for acquisition of land after its valuation and along approved procedures which ensure adequate, fair and timely compensation to the landowners. The Act requires that adequate, fair and prompt compensation is paid before taking possession of land and property. Dispute arising from the compensation to be paid should be referred to the court for decision if the Land Tribunal cannot handle. The key consideration regarding this Act is to ensure landowners affected by the road construction project are adequately and timely compensated. MoWT and the respective District Local Governments will follow stipulated guidelines in acquiring land where should it become necessary.

4.2.12 HISTORICAL MONUMENTS ACT, CAP 46

The Act provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest and for other matters connected therewith. Some cultural sites or objects of significance to indigenous communities might be encountered/ affected during project implementation. Therefore, this Act gives guidance A Chance Finds Procedure shall be triggered in the event that objects of Cultural Significance are encountered. The CFP is contained in the main road CESMP.

4.2.13 ROADS ACT, 2019

The Road Act, Article 21 grants the Ministry legal rights to undertake all necessary action on the proposed upgrade of selected roads including material extraction areas like the quarry and borrow pits. The Act requires compensation of land owners and mitigation of damages caused by operating material source areas. All operations at such areas should adhere to environmental standards and safety regulations like fencing the site, security and restoration of the site after material extraction. The Act therefore aims at minimizing environmental degradation and ensuring safety of the public during road construction. The Contractor will therefore ensure that construction activities are conducted in a manner that minimizes environmental harm and ensures safety of people.

4.2.14 NATIONAL ENVIRONMENT (ENVIRONMENT AND SOCIAL ASSESSMENT) REGULATIONS, 2020

These Regulations reinforce the ESIA requirement and describe procedures to be followed in conducting ESIA for projects. The regulations also charge the developer with the responsibility of ensuring that mitigation measures from the ESIA are complied with. In

this regard, therefore, MoWT will conduct the ESIA in line with national requirements and will ensure that recommendations proposed are implemented.

These regulations further require projects to undertake post assessment environment and social audits to ensure that predictions made during the assessment are properly managed. The regulations provide for self-auditing by the project owners (Section 31) and by NEMA (Section 32). The regulations require a project to undertake first audit not less than 12 months but not later than 36 months from project commencement, and submit findings thereof to NEMA.

4.2.15 THE NATIONAL ENVIRONMENT (WASTE MANAGEMENT) REGULATIONS S.I NO 49 2020.

These regulations require waste disposal in a way that would not contaminate water, soil, and air or impact public health. This is in relation to onsite storage, haulage and final disposal. According to the regulations, waste haulage and disposal should be done by licensed entities.

These regulations apply to all categories of hazardous and non-hazardous waste and to their storage and disposal or movement into and out of Uganda. The regulations promote cleaner production methods and require waste minimization by eliminating use of toxic materials; reducing toxic emissions and recovering and reuse of waste.

Of much relevancy to the project, the regulations promote cleaner production methods that enable the recovery and reuse of wastes, reclamation and recycling. Further the regulations require hazardous waste to be stored in facilities specially designed for that purpose and that such facilities obtain licenses from NEMA.

4.2.16 NATIONAL ENVIRONMENT (NOISE STANDARDS AND CONTROL) REGULATIONS, S.I.NO.22, 2024

Part III Section 8 (1) requires machinery operators, to use the best practicable means to ensure that the emission of noise does not exceed the permissible noise levels. The regulations require that persons to be exposed to occupational noise exceeding 85 dBA for 8 hours should be provided with requisite ear protection. The regulatory noise limits at construction sites are presented in the table below

Table 4. 1: Regulatory noise limits (Uganda)

Facility	Noise limits dB (A) (Leq)	
	Day*	Night*
Construction sites	75	65
*Time frame: Day 6.00a.m. -10.00 p.m.; Night 10.00 p.m. - 6.00 a.m.		

Source: The National Environment (Noise Standards and Control) Regulations, 2003.

These regulations would be very critical at the stone quarry operations. Noise from blasting and rock crushing is bound to affect workers and the local community.

4.2.17 THE NATIONAL ENVIRONMENT (AIR QUALITY STANDARDS) REGULATIONS S.I.NO.22 2024

Considering that quarry equipment and machinery are powered by diesel/ gasoline engines, pollutants such as CO₂, NO_x, SO_x, VOC and suspended particulate matter are expected to be emitted. The national air quality standards provide the following regulatory limits for these emissions

Table 4. 2 Regulatory air quality standards for selected pollutants

Pollutant	Averaging time for ambient air	Standard for ambient air
Carbon dioxide (CO ₂)	8 hr	9.0 ppm
Carbon monoxide (CO)	8 hr	9.0 ppm
Hydrocarbons	24 hr	5 mgm ⁻³
Nitrogen oxides (NO _x)	24 hr 1 year arithmetic mean	0.10 ppm
Smoke	Not to exceed 5 minutes in any one hour	Ringlemann scale No.2 or 40% observed at 6m or more
Soot	24 hr	500 µg/Nm ⁻³
Sulphur dioxide (SO ₂)	24 hr	0.15 ppm
Sulphur trioxide (SO ₃)	24 hr	200 µg/Nm ⁻³

Note: ppm = parts per million; “N” in µg/Nm⁻³ connotes normal atmospheric conditions of pressure and temperature (25°C and 1 atmosphere).

These are the policy and legal provisions reviewed to guide the assessment, other relevant laws will be identified and reviewed in the course of the ESIS.

4.3 INTERNATIONAL AGREEMENTS

Some of the global and regional environmental conventions and agreements Uganda is party to that are relevant to the proposed project are presented below:

4.3.1 THE UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY (CBD) 1992.

Earth Summit in Rio de Janeiro, is a global treaty that aims to conserve biodiversity, promote sustainable use of its components, and ensure fair and equitable sharing of benefits from the utilization of genetic resources. It's a key agreement for sustainable development, with 196 Parties (nearly all countries) participating.

Relevance to the project: Parties to this convention are required to undertake ESIA for projects likely to have significant adverse effects on biodiversity and develop plans for the conservation and sustainable use of biodiversity.

4.3.2 THE AFRICAN CONVENTION ON THE CONSERVATION OF NATURE AND NATURAL RESOURCES, 1968

The Contracting States to this convention are required to undertake to adopt measures to ensure the conservation, utilization and development of soil, water, flora and fauna resources in accordance with scientific principles and with due regard to the best interests of the people.

Relevance to the project: The Contracting States to this convention are also required to ensure that the conservation and management of natural resources are treated as an integral part of national and/or regional development plans. In addition, during the formulation of all development plans, full consideration is required to be given to ecological, as well as to economic and social factors.

4.3.3 CONVENTION FOR THE SAFEGUARDING OF THE INTANGIBLE CULTURAL HERITAGE, 2003

The Convention for the Safeguarding of the Intangible Cultural Heritage calls on states that have ratified it to safeguard living heritage in their own territories and in cooperation with others. Ratified by more than 80 countries, it seeks to celebrate and safeguard the intangible heritage distinctive for particular communities. At the same time, the convention does not intend to establish a hierarchy among heritage elements or identify some as more valuable or important than others. The Convention affirms that the intangible heritage of all communities whether they are large or small, dominant or non-dominant deserves our respect.

The convention defines “intangible cultural heritage” as the practices, representations, expressions, knowledge, skills as well as the instruments, objects, artefacts and cultural spaces associated therewith that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

Relevance to the project: The preservation of cultural heritage is inherently affirmed and undertaking ESIA studies on projects becomes a practical requirement.

4.4 WORLD BANK ENVIRONMENTAL AND SOCIAL STANDARDS TRIGGERED BY THE PROJECT.

The World Bank Environment and Social Framework (ESF) is an elaborate systematic approach to guaranteeing sustainable development. The ESF sets out the Bank's vision for sustainable development, the Environment and Social policy for investment project financing and ten mandatory Environment and Social Standards (ESS) that guide borrowers in the course of project implementation. The standards have been applied to:

- (a) support Government of Uganda in achieving Good International Industry Practices (GIIPs) relating to environmental and social sustainability;
- (b) assist GoU in fulfilling their national and international environmental and social obligations;
- (c) enhance nondiscrimination, transparency, participation, accountability and governance; and
- (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement and disclosure.

The Bank's Access to Information Policy applies to the entire ESF and requires disclosure of the ESIA.

The World Bank uses ten ESS standards to mainstream Environment, Health, Safety and Social Safeguards into development financing. MoWT shall ensure that triggered standards are implemented. The following standards have been reviewed to guide assessment on the selected roads.

4.4.1 ESS1: ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

ESS1 makes it incumbent on project developers to undertake comprehensive assessment and monitoring of environmental and social impacts and risks at all phases of project development. MoWT is obliged to commission an Environment and Social Impact Assessment and further a Resettlement Action Plan where applicable. The ESIA will inform project design of the selected roads, guide stakeholder Engagement and overall impact identification. ESS1 further aids identification of mitigation measures and actions to further improve decision-making, while emphasizing application of the mitigation hierarchy to avoid, minimize and reduce risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts. In line with ESS1 MoWT will undertake stakeholder engagement and disclose appropriate information in accordance with ESS10. Monitoring and reporting of environment and social performance of the project on all ESSs will be mandatory as specified in ESS1.

4.4.1.1 ENVIRONMENTAL AND SOCIAL RISK CLASSIFICATION (ESRC)

The World Bank ESF 2017 classifies all projects (including projects involving Financial Intermediaries (FIs) into one of four classifications: *High Risk*, *Substantial Risk*, *Moderate*

Risk or Low Risk (Table 4.3 below). In determining the appropriate risk classification, the following parameters are taken into consideration: the type of project, its location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs.

Table 4.3 Summary of project categorization based on ESF 2017

Aspect	High Risk	Substantial Risk	Moderate Risk	Low Risk
Project type, location, sensitivity, scale	Complex large to very large scale in sensitive location(s).	Not as complex; large to medium scale not such sensitive location.	No activities with high potential for harming people or environment; located away from sensitive areas.	Few or no adverse risks and impacts.
Nature & magnitude of risks & impacts, available mitigation	Mitigation unproven: unable to entirely address significant risk; high residual value.	Mitigation more reliable: significant risks but possible to avoid or address.	Easily mitigated: site specific, low magnitude risks.	Nothing to mitigate- no further assessment after screening.
Borrower capacity and commitment	Challenges and concerns about track record regarding E&S issues, significant stakeholder engagement capacity, commitment, track record concerns.	Some concerns about borrower track record, engagement capacity but readily addressed.	Sufficient borrower experience, track record, stakeholder engagement capacity.	Minimal or negligible risks to and impacts on human populations and/or the environment
Context of risk relevant to ES measures	Significant effects on ability to mitigate risk - significant contextual risks outside project control impacting on E&S performance and outcomes.	Some effects on ability to mitigate risk - known and reliable mechanisms to prevent or minimize, enforcement is weak in some respects, some stakeholder engagement concerns but readily addressed.	No effects on ability to mitigate risk – no contextual risks with effects on E&S performance	Negligible risk.

Based on the baseline studies, field findings, and proposed project activities, the proposed NERAMP Component project is classified under **Substantial Risk Project** on account of:

- a. **Project type, Location, Sensitivity and Scale:** The selected town roads and the access road to Bidi Bidi Settlement are existing roads that will be upgraded and not a greenfield. They will not therefore, entail substantial clearance of vegetation/ or impact any critical habitat.
- b. **Nature & magnitude of risks & impacts and available mitigation measures:** Given the type and scale of expected road upgrade construction activities; there will likely be substantial environmental and social impacts that may range from health and safety of both the workers and host community, air and noise pollution, impacts of extraction, processing and transportation of construction materials. However, the likely impacts will readily be identified and mitigated following the mitigation hierarchy through project design measures and Good International Industry Practices (GIIP).
- c. **Borrower Capacity and Commitment:** Given MoWT's experience with WB supported projects and the Environmental and Social Management System formulated with support from the Bank, the Ministry has the capacity and competences to implement Environment and Social Safeguards

Context of risk relevant to ES measures: Some aspects may affect project performance and ability to mitigate risk, for example possible weak enforcement and institutional coordination by MoWT, Engineering Consultants, NEMA, MoGLSD, Districts Local Governments and Municipal Authorities. There is also a possibility of having a weak Grievance Management System to address host community issues and relations with the vast Refugee population. The project contextual issues will be mainstreamed into the design and as part of the detailed ESIA

Comparison Relevant Uganda Laws and Regulations

There are existing laws and regulation within the Uganda Environment and Social Assessment regulatory regime that mirror the provisions and requirements of ESS1. The National Environment Act Cap 181 together with the National Environment (Environment and social Assessment) Regulations 2020 provide for requisite levels of assessment for the selected roads and procedures to be followed. The different schedules specifically schedule 5 of the NEA Cap 181 gives detailed guidance on Assessments. The review of the National Regulatory Regime and the Bank ESS1 reveals neither contradictions nor gaps with regards to this project.

4.4.2 ESS2 LABOUR AND WORKING CONDITIONS

Environment and Social Standard 2 of the World Bank Environment and Social Framework is cast in such a way as to streamline workers' rights, benefits and other general work conditions irrespective of the category they find themselves in. The Bank recognizes the importance of employment creation, income generation and poverty alleviation albeit the challenges of worker exploitation, discrimination, sexual harassment, child labour and a

horde of other ills that may compromise project benefits. Through ESS2, the Bank seeks to enhance the protection of workers' rights and promote a safe work environment. The Bank hence requires that all borrowers undertake to institute mechanisms that either mainstream, operationalize and address:

- a. Working conditions and management of worker relationships
- b. Protect the work force
- c. Operationalise a Grievance mechanism
- d. Ensure Occupational Health and Safety (OHS)
- e. Management of contracted workers
- f. Management and recruitment of Community workers
- g. Concerns of primary supply workers

Comparison Relevant Uganda Laws and Regulations

A number of laws address requirements and provisions of ESS2 (Labour and Working Conditions) The Occupational Safety and Health (OSH) Act 2006 as amended, The Employment Act 2006 and the Workers' Compensation Act of 2000 are the principal pieces of legislation regulating the work environment, worker's welfare remuneration, deployment, injuries at work, disablement among others. Different provisions of these Acts hence prescribe modalities that guarantee the rights of workers and their safety and further seeks to harmonize relationships between employees and employers, protect workers' interests and welfare and safeguard their occupational health and safety.

However, much as the laws address issues of discrimination, issues on minority groups are not well streamlined. Given the hazy focus on minority rights, the project shall adopt the Bank nondiscrimination clauses as contained in ESS2.

4.4.3 ESS3 RESOURCE EFFICIENCY AND POLLUTION PREVENTION AND MANAGEMENT

Environment and Social Standard 3, focuses on issue of resource efficiency and pollution. Cognizant of the pollution potential of development activities and their ability to disrupt natural ecosystems and provisioning services and their contribution to Green House Gases (GHG), the Bank sets out guidelines for resource exploitation and use and further for pollution management throughout the project life cycle consistent with Good International Industrial Practices (GIIP). The Bank hence requires that the borrower addresses issues of resource efficiency and pollution management. The selected roads upgrade project will require close guidance on the issues triggered by ESS3 including

- **Energy use:** The Contractor shall adopt measures that optimize energy use to the extent that is technically and financially feasible.
- **Water use:** The Contractor is obliged to ensure that water conservation measures are adopted during works to the extent possible. The Company shall adopt technically and financially feasible measures that avoid or minimize water usage impacts on the environment and the communities.
- **Raw material use:** The Contractor shall undertake to use construction technologies that conserve resources in line with EHSs of the world Bank and GIIP is encouraged by ESS3.

- **Pollution Prevention and Management issues.** During works, the contractor shall adopt mechanisms that avoid the release of pollutants or when avoidance is not feasible, minimize and control the concentration and mass flow of their release using performance standards and measures as specified in National laws or the EHSs, whichever is most stringent. Site remediation is also made a requirement under ESS3 as well as alternative evaluation of project location.

Pollution management shall require:

- a. Characterization and assessment of air pollution sources including GHG of the project
- b. Management of hazardous and non-hazardous waste and
- c. Management of chemicals and hazardous materials in accordance with ESS3 requirements.

Comparison with Relevant Uganda Laws and Regulations

The Ugandan regulatory regime addresses issues of resource efficiency and pollution prevention and Management through multiple laws. The principles laws include the Electricity (Amendment) Act, 2022, the Petroleum Act, 2003, the Water Act, Cap 152, the Mining Acts 2020 and numerous regulations on discharge of effluence, Management of wastes including hazardous wastes, protection of wetlands and river banks all have provisions on resource efficiency, pollution prevention and Management. A comparison of the national regulatory framework with the ESS3 requirements reveals no contradictions or gaps in any. Both regulatory regimes shall apply during assessment.

4.4.4 ESS4 COMMUNITY HEALTH AND SAFETY

ESS4 focuses on health, security and safety issues of project affected communities. Project actions may compromise security at work sites through spread of communicable diseases including HIV/AIDS and impacts associated with flying projectiles and vibrations. The project concerns shall be addressed in a number of areas as listed below in line with ESS requirements

- a. The Contractor will be obliged to address issues of equipment design and safety.
- b. Safety of services provided by the contractor to affected communities
- c. Community exposure to sexually transmitted diseases including HIV/AIDS and insect vector diseases such as malaria associated with water ponding in the quarry void and borrow area
- d. Management and safety of hazardous materials.
- e. Emergence preparedness and response.
- f. Security personnel contracted or employed by the Contractor shall be appropriately trained and must operate within the law and commitments made by MoWT.

Comparison with Relevant Uganda Laws and Regulations

The provisions of ESS4 on Community Health and Safety are amply reflected in the following principal pieces of laws and regulations thus the Public Health Act, Cap 281, the Water Act Cap 152, the Explosives Act Cap 298 and Water Resources Regulations, 1998. These laws and regulation together comprehensively address Bank ESS requirements. A

review of the regulatory requirements visa-vis ESS4 reconfirms their complementarity and reveals no contradictions. Assessment will be anchored on the two sets of instruments.

4.4.5 ESS5 LAND ACQUISITION, RESTRICTIONS ON LAND USE AND INVOLUNTARY RESETTLEMENT

The proposed construction of selected roads is expected to take place within the existing developed road ROW. There will be limited or no extra land take on this project, in the event that properties are affected by construction operations, national procedures shall be triggered. ESS5 shall apply to economic displacement of the identified kiosks and road side traders.

4.4.6 ESS6 BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES

Environment and Social Standard 6 anchors the conservation of biodiversity and sustainable management of living natural resources. Biodiversity loss during implementation of the selected town roads project shall impact wildlife. In addition to compromising utilitarian values, biodiversity carries inherent intrinsic value hence the protection of habitats is justified along these grounds.

ESS6 therefore requires that the contractor:

- a. Carries out an assessment of risks and impacts considering threats to biodiversity including habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, pollution and incidental take among others
- b. Designs a mitigation hierarchy for all identified risks and impacts in line with GIIP and national regulatory framework. A precautionary approach will be the basis for mitigation
- c. Undertakes a differentiated approach to risk management based on sensitivity and values of identified habitats. All habitats shall be categorized as either modified, natural or critical including those that are under any national protection regime.
- d. ESS6 makes observations on intentional or accidental introduction of alien or non-native species of flora and fauna into areas where they are normally not found. Alien species threaten biodiversity through over competition or complete destruction.

Comparison with Relevant Uganda Laws and Regulations

Management of Biodiversity in Uganda is regulated by basically three (3) principle pieces of legislation thus the Wildlife Act Cap 200, the National Forestry and Tree Planting (Amendment) Act of 2024 and the National Environment Act Cap 181. These laws and attendant regulations specify modalities for the conservation of biodiversity, management of protected areas and further regulate land use. The National Environment Act Cap 181 together with the National Environment (Environment and Social Assessment) Regulations 2020 address procedures for ESIA assessments including biodiversity

assessment. A review of these pieces of laws reveals no gaps or contradictions with the Bank ESS6 requirements and guidelines.

4.4.7 ESS8 CULTURAL HERITAGE

Environment and Social Standard 8 (ESS8) sets out general provisions on risks and impacts to cultural heritage from project activities. The standard sets out to protect cultural heritage from adverse impacts associated with project activities and support its preservation for sustainable development. The scope of application of ESS8 is quite diverse though centers on integration of cultural heritage into overall project planning and implementation. The project prepared a Cultural Heritage Plan.

The following scope is thus envisaged:

- a. The Contractor will undertake meaningful consultations with identified stakeholders through providing timely, understandable, relevant and accessible information.
- b. While consulting with stakeholders the Contractor shall follow all principles and guidelines as laid down in ESS10 Stakeholder engagement. A grievance mechanism will also be a key aspect of interface with stakeholders.
- c. Confidentiality on matters of cultural heritage is paramount and is given attention in ESS8.

Comparison with Relevant Uganda Laws and Regulations

The principal legislation in the management of Cultural Heritage is the Historical Monuments Act Cap 46. The Act provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest and for other matters connected therewith. Road construction has the potential to encounter chance finds, the Act specifically details procedures and requirement of a Chance Finds Procedure. The Bank ESS8 also elaborates the requirements of a chance finds procedure and stakeholder engagement protocols. No contradictions are observed though, ESS8 provides a more systematic approach to chance finds and stakeholder engagement. The project will hence adopt the bank procedures.

4.4.8 ESS 10 STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

Environment and Social Standard 10 recognize the importance of open and transparent engagement with project stakeholders. Success of any project is hinged on level and quality of stakeholder engagement which is an inclusive process expected to occur throughout the project life cycle.

In applying ESS10, the following scope is envisaged:

- a. **Stakeholder identification and analysis:** ESS10 requires the identification of key stakeholders of the project.
- b. **Information Disclosure:** The borrower is obliged to undertake timely and effective disclosure of information regarding the project including its purpose, nature, scale,

potential risks and impacts on the local communities and further present possible mitigation measures.

- c. **Engagement during project implementation and external reporting:** MoWT shall undertake continuous interaction with project affected persons throughout the project lifecycle as inferred in ESS10. Project affected Persons shall be availed all relevant information using appropriate means to enable them reach an informed decision.
- d. **Grievance mechanism:** A Project Level Grievance Redress Mechanism exists and is quite robust. The project will establish a specific Committee to guide the resolution and management of concerns, complaints and issues that may arise during the entire project life cycle. The GRM will be proportionate to identified potential risks and impacts.

Comparison with Relevant Uganda Laws and Regulations

Most of the laws and regulations triggered by this project do have mechanisms for Stakeholder Engagement, however, they lack grievance redress mechanisms, systematic stakeholder engagement procedures, disclosure protocols among others. The project has therefor adopted the Bank stakeholder and information disclosure procedures and protocols

4.5 INSTITUTIONAL ARRANGEMENTS.

The proposed road upgrade project will require coordination involving a number of national lead and regulatory agencies assisted by local district level sectoral Departments and Municipal Authorities. Non-Governmental Organizations will also contribute to the success of this project. The table below presents a profile of relevant institutions for the implementation of the road rehabilitation and upgrade project.

Table 4. 4 Institutional Framework

No	Institution	Mandate
2	Ministry of Works and Transport (MoWT)	The mandate of MoWT is to develop and maintain national road system, advise Government on general roads policy and contribute to addressing transport concerns. On this project MoWT is both a developer and lead agency. As a lead agency, MoWT manages national roads infrastructure and is responsible for mitigation of impacts associated with road development. As a developer on the other hand, MoWT is required to comply with National Environmental laws including undertaking EIA and Audits for road projects. The Ministry will ensure compliance with all conditions as prescribed on the NEMA certificate.

No	Institution	Mandate
3	National Environment Management Authority (NEMA)	The National Environmental Act Cap 181 establishes NEMA as the principal agency responsible for coordination, monitoring and supervision of environmental management activities. NEMA has a cross-sectoral mandate to oversee the conduct of ESIA through issuance of ESIA guidelines, regulations and registration of practitioners. It reviews and approves environmental impact statements (EIS) in consultation with sectoral agencies. NEMA and the network of District Environment Officers will undertake third party monitoring compliance with project approval conditions during implementation and decommissioning.
4	Water Resources Management Directorate. <i>Ministry of Water and Environment (MoWE)</i>	The Water Resources Management Directorate – (WRMD), has a responsibility to regulate quality and quantity of water resources in the country. The Directorate is responsible for the full range of integrated water resources management (IWRM) activities including monitoring, assessing, planning, allocating and regulating water resources. Specifically, the Water Resources Planning Department is responsible for water regulation through issuance of permits for water abstraction and wastewater discharge. Abstraction of water for road construction purposes and for domestic use in campsites will be regulated by this directorate. Also construction on surface water courses will require permits from this Agency.
5	Wetland Management Department. Ministry of Water and Environment (MoWE)	The Department is mandated to manage and monitor the use of wetlands to ensure sustainability. The road project will traverse a number of wetlands requiring monitoring and guidance from this Department.
6	Department of Occupational Safety and Health. <i>Ministry of Gender, Labour and Social Development.</i>	The Department is responsible for the welfare of workers including enforcing work place laws and regulations, worker compensation and disputes. The Department will be instrumental regulating the welfare of project workforce.
7	Department of Museums and Monuments <i>(Ministry of Trade, Tourism & industry)</i>	Archaeologists from the department responsible for museums and monuments in this Ministry would be useful in monitoring road project construction activities, especially excavations at borrow sites and any other excavation areas to ensure that chance

No	Institution	Mandate
		finds or artifacts of cultural significance are not destroyed.
8	Department of Geological mines and Surveys. (Ministry of Energy and Mineral Development	The Department of Geological Survey and Mines controls the mining sector (including stone quarrying) through the Mining Act.
9	Ministry of Lands, Housing and Urban Development	The Chief Government Valuer is responsible for determining the Compensation rates for all properties to be affected by road construction and auxiliary activities.
10	District Local Governments	Districts are headed by the Chair Local Council Five (LC5) who is the political head and a Chief Administration Officer, the technical head of district administration. Technical District personnel directly involved with the project include Environmental Officer, District Planner, Community Development Officer, District Director of Health Services, Wetlands Officer, Forestry Sector Manager, Agricultural Officer, District Water Officer, District Engineer, District Community Development Officer and District Gender officer. In addition, under MoWT there is provision for establishment of road committees that will be activated to sensitize communities about benefits of road development including participation in compensation matters and grievances, environmental monitoring and HIV/AIDS awareness.
11	District Land Boards	The district land board is responsible for land allocation at local government level. District land boards set compensation rates for crops and structures. In each District, compensation will be deduced utilizing rates developed by Koboko, Yumbe and Moyo district land boards.
12	Municipal/Town Councils	The project will be implemented in municipalities and town councils (Koboko, Yumbe, Moyo, Kuru,) Local governments at these levels will be responsible for monitoring project implementation especially implementation of Environment and Social Safeguards
13	Local Communities	These are the direct affected people. All road project impacts will be on communities especially in the right of way and households near material extraction areas.

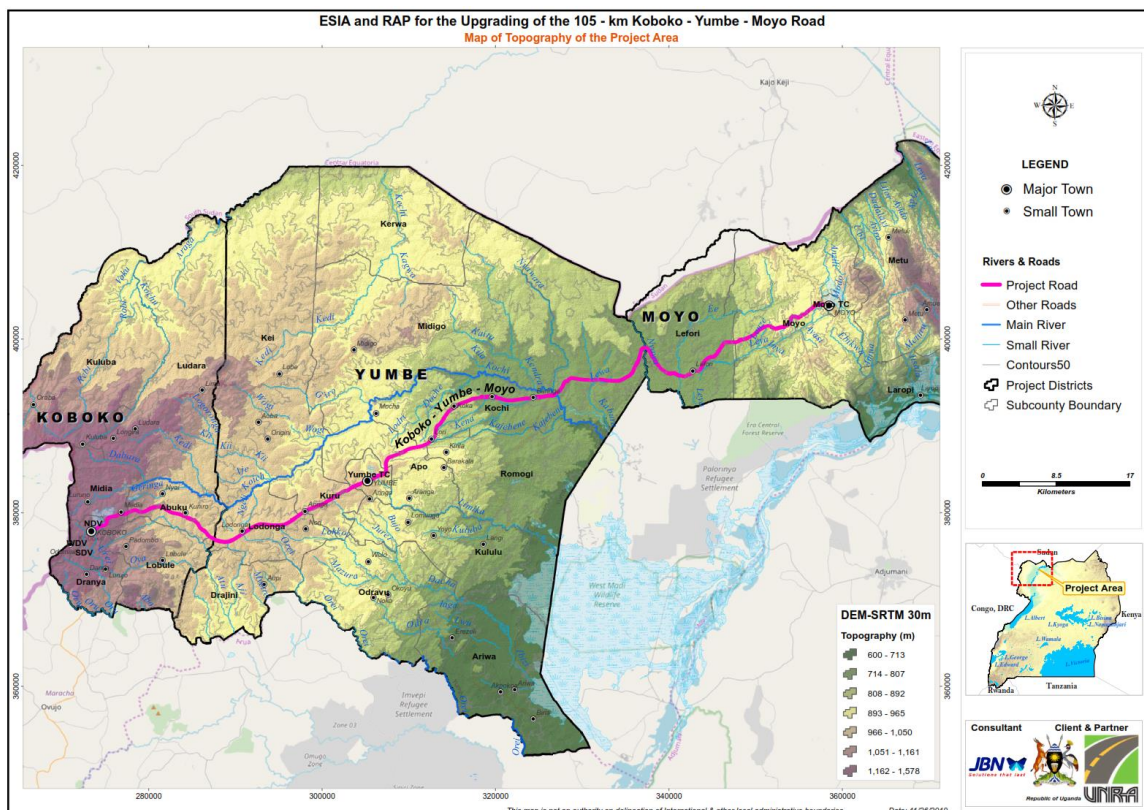
5.0 BIOPHYSICAL AND SOCIO-ECONOMIC BASELINE OF THE PROJECT AREA

5.1 BIOPHYSICAL ENVIRONMENT

The selected town roads for upgrade are located in a flat rolling terrain characteristic of the West Nile region. The project lies within the extensive savannah landscape of extensive grassland and scattered trees though now extensively modified especially through the development of the respective towns of Koboko, Yumbe and Moyo towns.

5.1.1 TOPOGRAPHY

The topography of the project area is characterized by extensive flat landscapes. The landscape from Koboko through Yumbe towards the border with Moyo is a very extensive flat plain with no significant contrasting feature while the section towards Moyo exhibits low lying hills superimposed on an extensive rolling plain. Much as the landscape in Moyo district has hilly sections, roads in Moyo Municipality is located in a flat to rolling landscape. This spectacular topography is a result of a combination of a complex geology and ancient denudation processes that have produced a series of magnificent landscapes associated with rifting and volcanic activity in East African. The lower slopes and ridge tops have been progressively shaped by continued denudation and deposition processes.

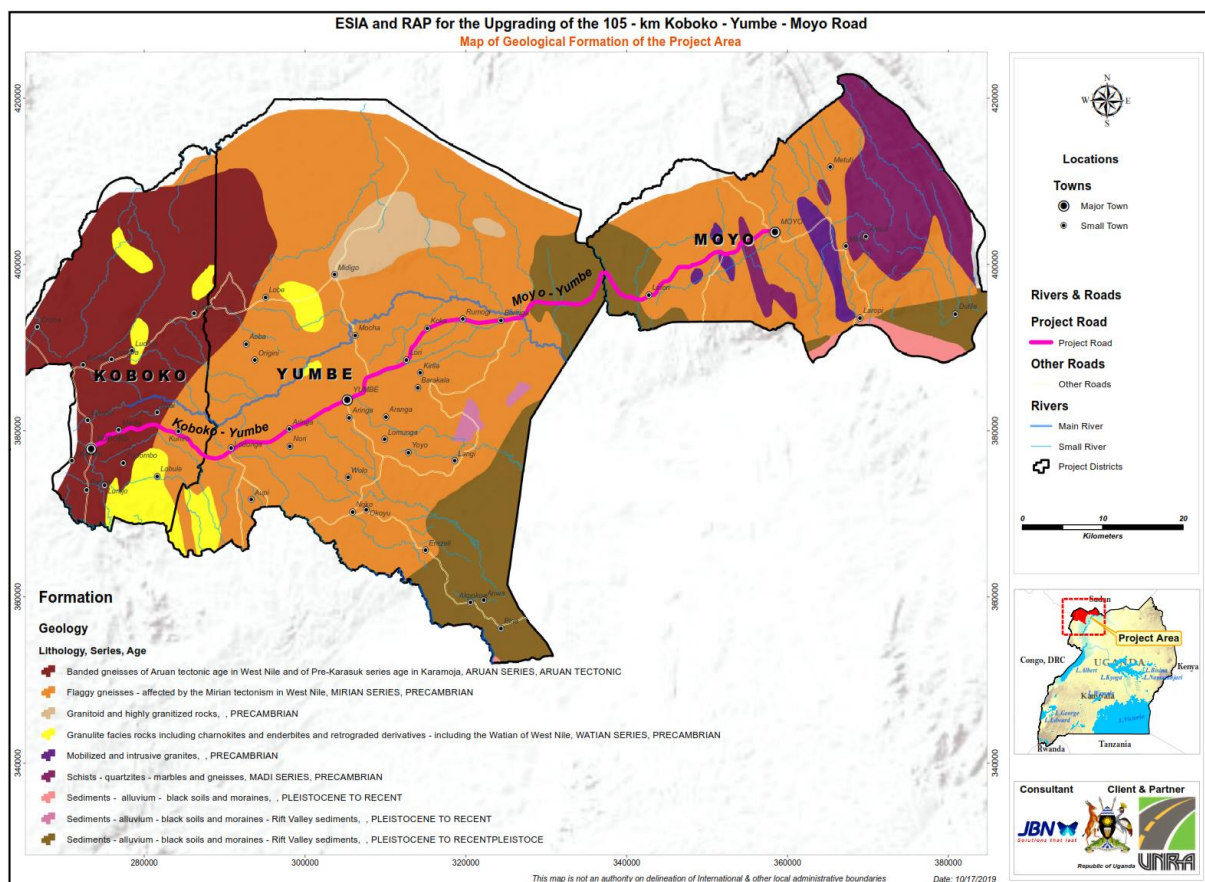


Source: ESIA Report for KYM
Map 5. 1 Topographic Map of the Project Area

5.1.2 GEOLOGY

The project area is underlain by some of the oldest Precambrian basement complex rocks much of which have been modified by tectonic processes associated with formation of the rift valley. The evidently deeply weathered Precambrian crystalline rocks associated with the general geology of the Albertine graben and adjacent regions resulting from tectonic processes that operated on Precambrian orogenic-metallogenic belts of Africa underlie the project area.

Following long periods of tectonic activity and mass wasting, the geology comprises thick sequences of sandstones and shales derived from basement gneisses and schists. The dominant Proterozoic lithologies (Karagwe-Ankolean system) occur further to the greater South Western Uganda and are less common to the north of Lake Albert where the project area lies. Undifferentiated gneisses, argillite, arenites and meta-sediments mainly shales, phyllites, sandstones, mica schists are represented in the project area.



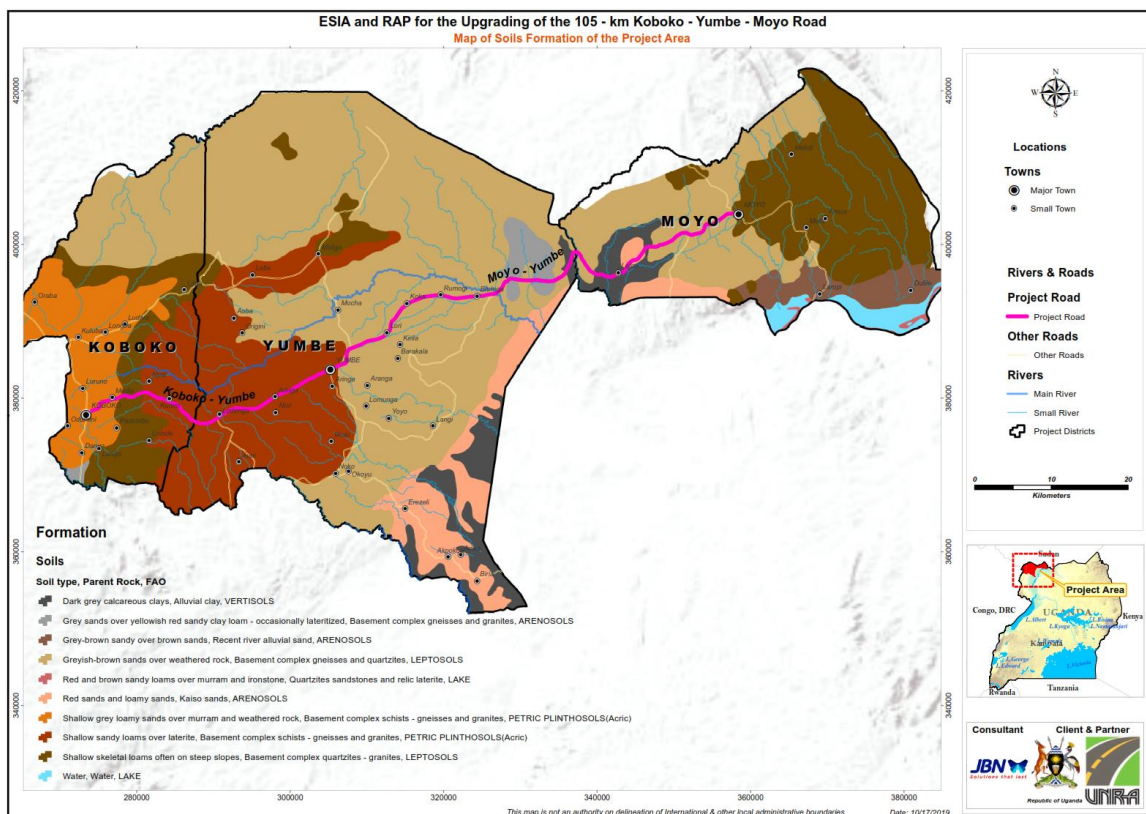
Source: ESIA Report for KYM

Map 5. 2 Geological Formations of the Project Area

5.1.3 SOILS

The soils of Koboko, Yumbe and Moyo districts are derived from prolonged deposition and weathering insitu and basically fall into ferrallitic soils with significant zones of vertisols characterized by poor drainage.

The distribution of ferrallitic soils is hinged on the local landscape features particularly the topographic conditions. According to Smith Cernuda (1951), ferrallitic soils are physically among the most stable soils. They are usually soils that have a high amount of sesquioxides which produces a net positive charge on clay-size particles. Instead of increasing the capacity to retain cations such as Ca, Mg and K, the iron-oxides on the contrary block the existing negative adsorption sites. Their use for crop cultivation is highly dependent on level of management. Vertisols are mainly found in valleys and flood plains where they have developed under prolonged periods of inundation to produce back cotton soils.



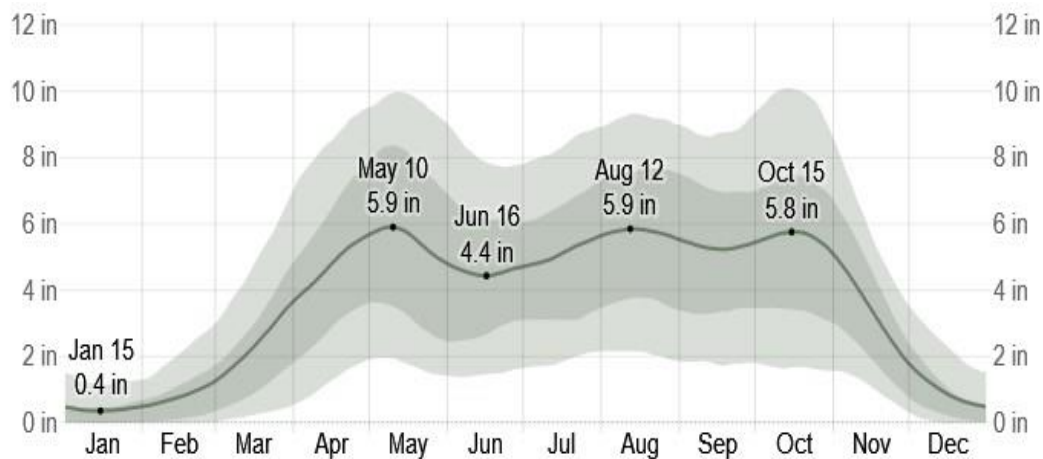
Source ESIA Report for KYM
Map 5. 3 Soils of the Project Area.

5.1.4 CLIMATE

Climate of the greater West Nile region displays a rather unimodal long term pattern though fluid peaks in May and October are observed. However, contemporary climate change scenarios do greatly modify the general established pattern with episodes of offseason rainfall and intense heat. Temperatures range from medium to high temperatures throughout the year.

Rainfall

The mean annual rainfall amounts for the region range from anywhere between 900-1100mm per annum and could be a little higher in the wettest parts of the project area and lower towards the rain scarce points. The Distribution is largely unimodal with the long subdued peaks in May and anywhere from October to November. The distribution is well represented by the figure below which gives rainfall figures for Arua the nearest weather station with recorded data. However, much as the distribution is consistent with the project area, amounts do vary.

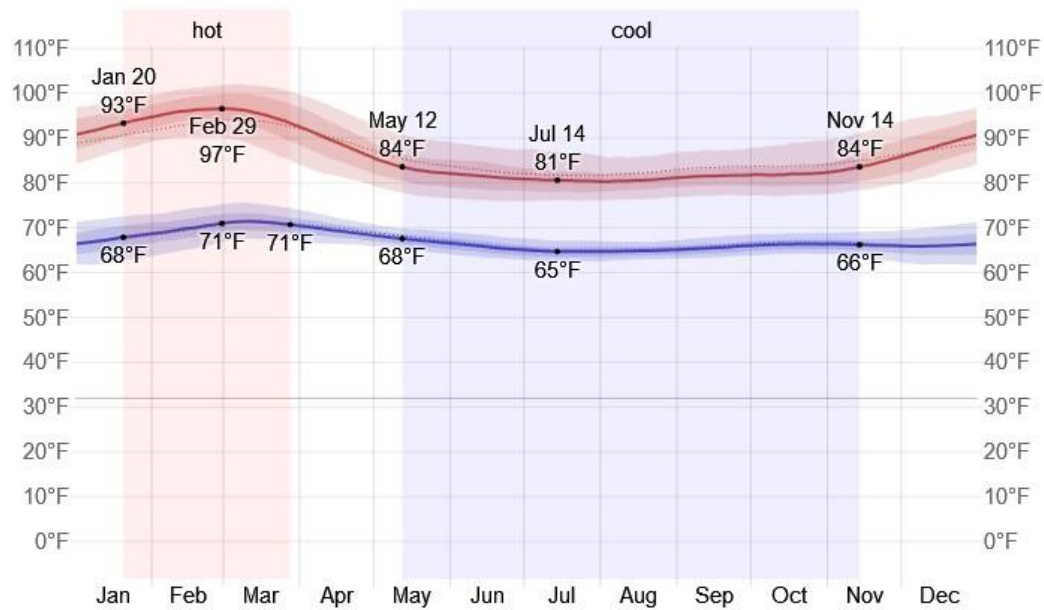


Source : Weather spark.com

Figure 5. 1 Mean monthly rainfall amount for Recorded at Arua

- **Temperature**

The mean monthly distribution structure for the minimum and maximum temperatures for the Yumbe zone is quite complex. The mean minimum monthly temperatures vary from a low of 17.3°C to 12.6°C, while the mean maximum temperatures vary from 27.0°C to 34.9°C. The highest temperatures have been recorded in the months of January, February and March, while the lowest temperatures have been recorded from July, August, September and October

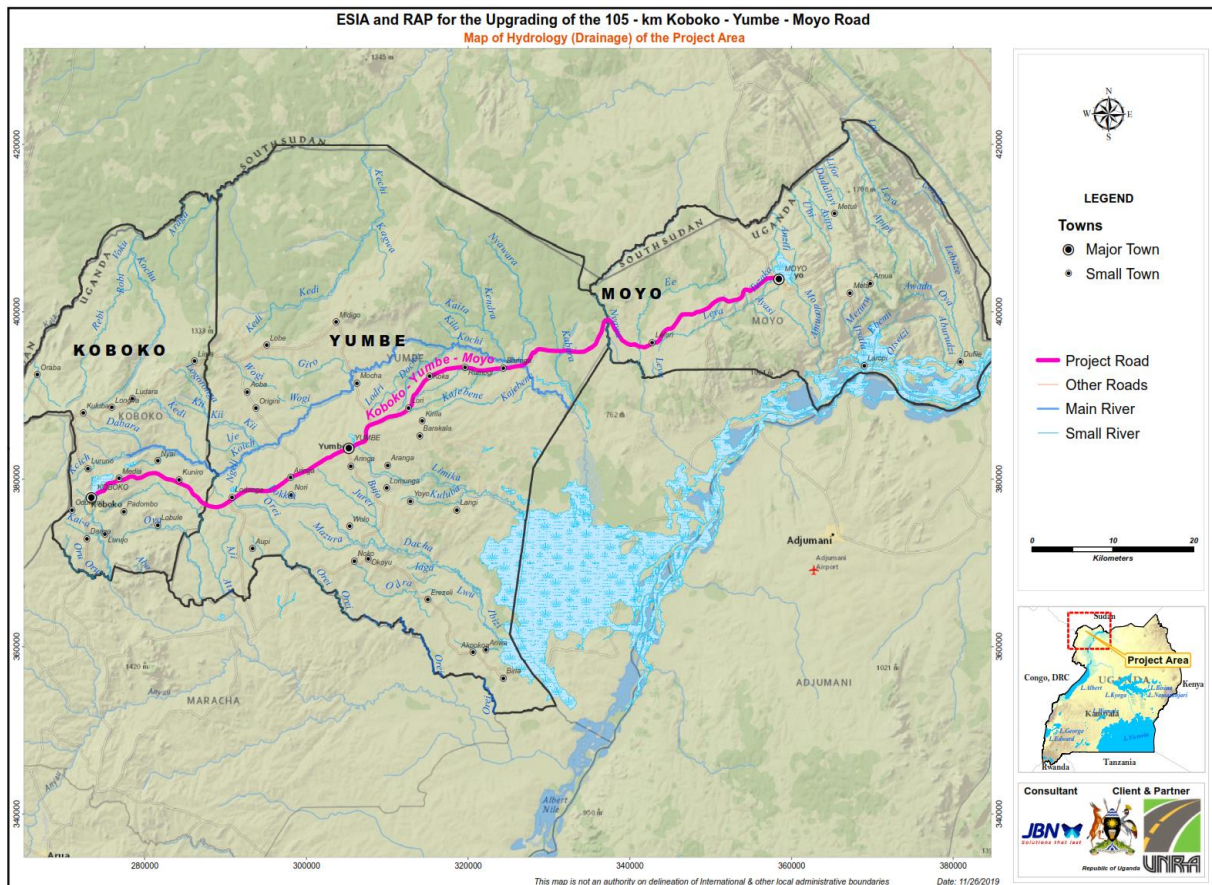


Source Weather spark.com

Figure 5. 2 Monthly temperature distribution in Yumbe

5.1.5 DRAINAGE

The three urban areas of Koboko, Yumbe and Moyo are generally located on long running ridge or catchment divide. Drainage systems therefore will be bisected by roads that run parallel along the ridge. Shallow surface streams and swamps are found within the project area of impact. The surface drainage streams are mainly intermittent with no visible flows during the dry season.



Source: ESIA Report for KYM

Map 5. 4 Drainage Map of the project area.

5.1.6 VEGETATION

The selected town roads are located within an extensive savanna mosaic of bush lands and thickets graduating into extensive woodlands in Moyo. However, all selected roads are located within areas that have experienced anthropogenically induced changes where population densities appear to be high. Existing land cover/land use zones are a reflection of the interplay of a diverse ensemble of factors including geology, soils, climatic variables and anthropogenic aspects within the project area. Being urbanized areas vegetation is represented by remnants with the exception of the 15km refugee access road.

5.1.6.1 CLASSIFICATION OF VEGETATION IN THE PROJECT AREA

Vegetation within the area can be classified into grasslands, bushland/thickets and post cultivation vegetation where woodlots and very scattered woody species have been established. Preliminary sampling was carried out in all identified vegetation zones.

- **Grasslands**

Much of grassland has been modified especially. The 15km refugee settlement access road remains the only portion with significant indigenous plant species. Where the remnants

occur, the following species were recorded: *Acacia hockii*, *Flueggea virosa*, *Gmelina arborea*, *Heteropogon contortus*, *Hyparrhenia rufa*, *Imperata cylindrical*, *Kigelia Africana*, *Leonotis nepetifolia*, *Setaria sphacelata*, *Vitellaria paradoxa*

- **Bushland/thickets**

Bushlands/thickets are established where soils are shallow and rocky. Cultivation has not taken place in these areas though livestock rearing is evident. These found along intermittent surface water courses. Plant species recorded within the sampled sites include the following: *Acacia hockii*, *Maytenus senegalensis*, *Ziziphus mauritiana*, *Balanites aegyptiaca*, *Flueggea virosa*, *Agave sisalana*, *Gmelina arborea*, *Hyparrhenia rufa*, *Piliostigma thonningii* and *Tectona grandis*

- **Stream Banks and Swamps**

There are a few shallow surface water courses within the project influence zone. A combination of prolonged availability water and silt deposition processes have led to vegetation species colonizing these sites. The following species were recorded at sampled sites: *Acacia hockii*, *Borassus aethiopum*, *Lantana camara*, *Chromolaena odorata*, *Flueggea virosa*, *Piliostigma thonningii*, *Tithonia diversifolia*, *Solanum incanum* and *Sesbania sesban*

- **Roadside Planted woodlots and scattered woody species**

Woodlots have been raised along the alignment for different purposes. These are either individual woodlot privately owned by households. Common species include the following: *Eucalyptus species* and *Tectona grandis*. Scattered woody species along the roads include *Mangifera indica*, *Tectona grandis*, *Senna siamea*, *Lantana camara*, *Thevetia peruviana*, *Borassus aethiopum*, *Azadirachta indica* and *Gmelina arborea*.

5.2 FAUNA

5.2.1 IDENTIFIED HABITATS FOR DETAILED SAMPLING

Ecological conditions within the project affected area are generally modified. The following habitat types were identified and detailed sampling will be conducted to establish faunal species occur in them. The habitats include the following:

- **Settlements**

All roads with the exception of the 15km Bidi Bidi settlement access road traverse settled areas. Sampling will be done along the selected roads to identify fauna species found in them.

- **Woodlots / Tree private plantations**

There are several woodlots planted by the community along the selected project roads within the 3 town. The woodlots comprise of Teak trees, Eucalyptus trees, mango trees,

etc. Sampling points will be established in the woodlots to establish which fauna species occur in them.

- **Seasonal Wetlands / Flood Plains**

Seasonal wetlands and flood plains occur in Moyo District. These will be sampled for fauna.

- **Rivers and Streams**

A number of rivers and streams, some of which are seasonal do occur along the project area. these will be sampled for fauna.

- **Ponds and Pools of water**

Ponds and pools of water occur in the project area. These occur in areas of unrestored burrow pits or pools of water along the road resulting from road maintenance activities or blocked drainage channels.

- **Open woodlands**

Open woodlands with Sheanut butter tree species and Acacia species occur in the project area. they will also be sampled for fauna

- **Grassland**

Grassland habitats also occur and will be sampled for fauna.

- **Rocky Habitat**

Rocky habitats also occur in the project area and these will also be sampled for fauna

5.2.1.1 IDENTIFIED POINTS ALONG KYM ROAD FOR FAUNA SAMPLING

The scoping study identified potential sampling points for biodiversity and are presented in appendix 1

5.2.1.2 PRELIMINARY OBSERVATIONS

Considerable anthropogenic modification of habitats has occurred in the project area these being urban areas. Subsistence agriculture with sedentary farmers has meant crop cultivation is a significant feature of the landscape hence influencing fauna distribution along the alignment.

Anthropogenic activities have impacted negatively on the flora of most areas along the road which also affects the fauna that depend on the flora for food, cover and shelter. Some of the observed fauna during the reconnaissance include the following:

Table 5. 1 Observed Fauna at Sampled Points

Taxa	Findings
------	----------



Butterflies	Some of the common butterflies seen include: Citrus Swallowtail <i>Papilio demodocus</i> Small Streaked Sailer <i>Neptis goochi</i> Diadem <i>Hypolimnys misippus</i> Narrow Blue-banded Swallowtail <i>Papilio nireus</i> African Migrant <i>Catopsilia florelia</i>
Herpetofauna	One amphibian species (Eastern Groove-crowned Bullfrog <i>Hoplobatrachus occipitalis</i>) was observed. The Bullfrog takes advantage of the pools of water along the road to breed. Two species of reptiles were seen during scoping and they include Red-Headed Agama (<i>Agama agama</i>) and Rainbow skink (<i>Trachylepis margaritifera</i>). Reptiles were common throughout the project area, as the two species are adaptable and take advantage of any crevices. The Nile Monitor lizard (<i>Varanus niloticus</i>) and the Central African Rock Python (<i>Python sebae</i>) were reported by community members as occurring.
Birds	Several species of birds occur in the project area. the following were commonly seen during the scoping reconnaissance. African Palm Swift <i>Cypsiurus parvus</i> Ring-neck Dove <i>Streptopelia capicola</i> Northern Red Bishop <i>Euplectes franciscanus</i> African Pied Wagtail <i>Motacilla aguimp</i> Common Bulbul <i>Pycnonotus barbatus</i> Black kite <i>Milvus migrans</i> Pied Crow <i>Corvus albus</i> Yellow Mantled Widowbird <i>Euplectes macrourus</i> Piapiac <i>Ptilostomus afer</i> White-browed Coucal <i>Centropus superciliosus</i> Red chested cuckoo <i>Cuculus solitarius</i> Bronze Mannikin <i>Lonchura cucullata</i>
Mammals	Discussion with the community members revealed the occurrence of House Rat <i>Rattus rattus</i> , Black and White Colobus monkey, Baboons and Antelopes.



5.2.1 AIR QUALITY NOISE AND VIBRATIONS KEY RECEPTORS.

The project areas are predominantly located in urban settings characterized by high impact human activities. The major activities are associated with commerce thus exchange of goods and services. The transport sector is developing within the municipalities with a combination of two stroke automobiles (BodaBoda) to heavy diesel engine powered trucks. Being an urban project, air quality sensitive receptors are quite diverse including schools, health facilities, administrative areas, commercial service areas and homesteads

among others. In a nutshell, all points are potential sensitive receptors. The table below presents sensitive receptors where air quality and noise sampling will be carried out.

Table 5. 2 Air quality, Noise and Vibration Assessment Points

Sampling point	GPS coordinates	Site description
Moyo Technical Institute	36N 0358086, 0403290	 <p>CAMON 20 2026.02.12 14:27</p> <p>24mm f/1.7 1/1042s ISO50 3°58'51"N 31°43'19"E</p>
Church	36N 0371780, 0377469	 <p>CAMON 20 2026.02.20 11:21</p> <p>24mm f/1.7 1/1036s ISO50 3°58'51"N 31°43'19"E</p>
Smart Pearls Day Care & Kindergarten	36N 0357951, 0404018	

		 <p>CAMON 20 • 2026.02.20 12:02</p> <p>24mm f/1.7 1/887s ISO52 3°39'13"N 31°4'514"E</p>
<p>Moyo School of Nursing and Midwifery & Hostel</p>	<p>36N 0358111, 0404770</p>	 <p>CAMON 20 • 2026.02.20 14:40</p> <p>26mm f/1.7 1/946s ISO53 3°39'6"N 31°43'10"E</p>

Moyo Town
Council P/S
Road

36N
0358390,
0404461



CAMON 20 •
2026.02.20 13:05

24mm f/1.7 1/1100s ISO50
3°39'30"N 31°43'30"E

Homing Dove
Primary
School

36N
0357975,
0404319



CAMON 20 •
2026.02.20 13:23

24mm f/1.7 1/727s ISO53
3°39'20"N 31°43'12"E

Moyo General Hospital

36N
0358706,
0404181



CAMON 20
2026.02.20 13:31

24mm f/1.7 1/1543s ISO50
3°39'19"N 31°13'34"E

Spring Primary School

36N 0272173,
0377534



CAMON 20
2026.02.20 17:47

24mm f/1.7 1/948s ISO52
3°24'48"N 30°56'57"E

5.3 SOCIO-ECONOMIC CHARACTERISTICS

This section provides a description of socio-economic baseline conditions in the proposed project area. A detailed socio-environmental baseline assessment will be undertaken during the ESIA but sections below provide preliminary site investigations and observations made during the scoping exercise. A wider baseline overview of conditions in project areas is provided first to give context to observations made during the scoping study.

5.3.1 LOCATION AND ADMINISTRATIVE UNITS

The three towns are located in the West Nile Region. Koboko is recognized as a municipality while the other two Yumbe and Moyo function as Town Councils. Koboko is comprised of three divisions thus North division, South division and Western Division. The division are further divided into wards. In total Koboko Municipality has 10 wards. Yumbe TC is divided into 8 wards while Moyo has only 4 wards.

Moyo

Table 5.3 Administrative Units in the Project Area.

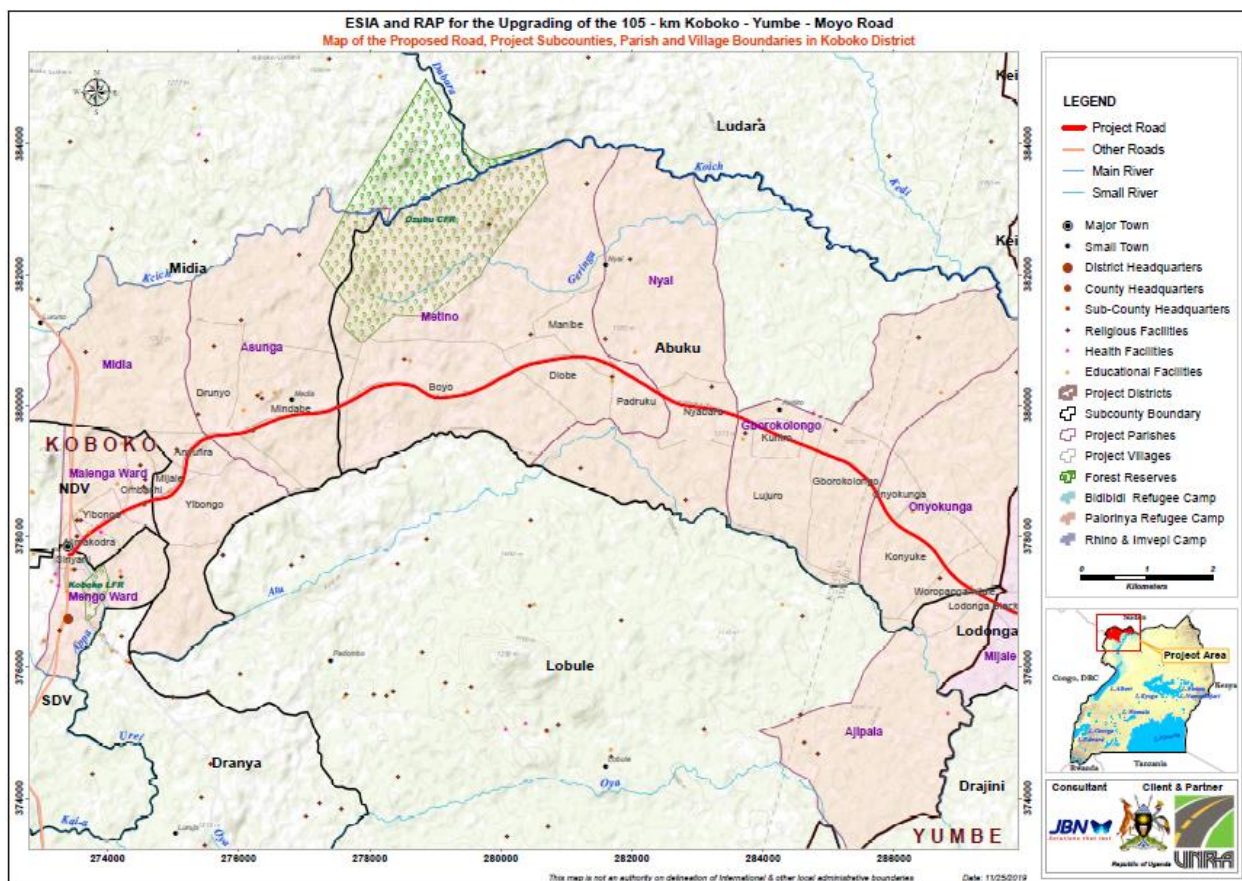
KOBOKO MUNICIPALITY	DIVISION	WARD
	NORTH	Ombachi
		Teremunga
		Triangle
	SOUTH	Abele
		Apa
		Mengo
		Nyangilia
	WESTERN	Amunupi
		Godia
		Isoko
YUMBE TOWN COUNCIL		
		Amanyiri Ward
		Ariguyi
		Arunga
		Bilewa
		Charanga
		Lukutua
		Peace
		Rube
MOYO TOWN COUCIL		
		Besia
		Celecelea
		Central
		Elenderea

5.3.2 POPULATION SIZE, GROWTH AND DISTRIBUTION

The 2024 population census which is the main sources of demographic data in general and information on population size, distribution and growth rate in particular. Koboko Municipality had a total population of 67,727 persons (31,130 males and 36,597 females), Yumbe had a total population of 65,882 persons (32,619 males and 33,263 females), Moyo registered a total population of 13,974 (7,352 males and 6,622 females). Table 5.2 below presents population figures the towns.

Table 5. 4 Population figures for Koboko Municipality

DIVISION	WARD	MALES	FEMALES	TOTAL POPN
KOBOKO MUNICIPALITY		31,130	36,597	67,727
NORTH		9,901	11,362	21,263
	Ombachi	4,587	5,259	9,846
	Teremunga	1,878	2,131	4,009
	Triangle	3,436	3,972	7,408
SOUTH		12,051	14,263	26,314
	Abele	3,063	3,729	6,792
	Apa	2,159	2,408	4,567
	Mengo	4,601	5,677	10,278
	Nyangilia	2,228	2,449	4,677
WESTERN		9,178	10,972	20,150
	Amunupi	977	1,004	1,981
	Godia	4,733	5,719	10,452
	Isoko	3,468	4,249	7,717
YUMBE TC				
YUMBE TC	YUMBE TOWN COUNCIL	32,619	33,263	65,882
	Amanyiri Ward	3,344	3,185	6,529
	Ariguyi	5,424	5,511	10,935
	Arunga	2,185	1,914	4,099
	Bilewu	5,768	5,978	11,746
	Charanga	5,558	5,894	11,452
	Lukutua	3,533	3,491	7,024
	Peace	3,178	3,469	6,647
	Rube	3,629	3,821	7,450
MOYO TC		7,352	6,622	13,974
	BESIA WARD	1,920	1,626	3,546
	CELECELEA	2,921	2,826	5,747
	CENTRAL WARD	1,021	802	1,823
	ELENDEREA	1,490	1,368	2,858



Map 5. 5 Map of Koboko district

5.3.3 ETHNICITY AND RELIGIOUS AFFILIATION

The majority native tribe of Koboko, Yumbe and Moyo sub region are mainly the Kakwa, the Aringa, Lugbara and Madi people. Their languages belong to the Eastern Nilotic language family. The main religious denominations are Roman Catholic, Anglican and Islam though there are Seventh Day Adventists, traditionalists, Pentecostals and atheists. Within the project area, Mosques and churches exist along the alignments of the selected roads

5.3.4 EDUCATION AND LITERACY

Education is a very important aspect in the development of physical infrastructure and associated services. As such, the Government's Education policy is to promote quality basic education by improving access by girls and boys, equity and retention in all Primary schools and other levels of learning to build the capacities of young people and give them confidence to start business enterprises, a multiplier for job creation. The number of children out of school is a very useful indicator of development challenges being experienced by the community. Table 5.3 below presents data on children out of school in the three towns

Table 5. 5 Children out of School by Age Group

KOBOKO MUNICIPALITY/ DIVISION	6 years		3-5years		6-12years		15-17 years	
	Not started Primary	Popn	Not attending ECCE	Popn	Out of school	Popn	Out of school	Popn
KOBOKO MUN.	1,087	2,080	3,084	6,019	2,280	13,755	2,907	10,551
NORTH	307	630	872	1,819	594	4,209	819	3,465
SOUTH	423	792	1,198	2,265	1,033	5,238	1,219	3,929
WEST	357	658	1,014	1,935	653	4,308	869	3,157
YUMBE TC WARDS	1,440	2,305	5,759	7,130	7,030	14,437	4,935	9,549
Amanyiri	156	253	605	727	743	1,564	431	931
Ariguyi	216	352	909	1,128	1,198	2,379	831	1,591
Arunga	91	143	371	453	474	910	312	566
Bilewu	271	403	1,029	1,253	1,364	2,511	996	1,722
Charanga	234	420	935	1,241	837	2,631	658	1,713
Lukutua	187	266	758	838	881	1,581	536	971
Peace	165	239	649	774	887	1,382	628	957
Rube	120	229	503	716	646	1,479	543	1,098
MOYO TC WARDS	71	243	266	814	178	1,889	178	1,889
Besia	15	58	86	209	80	453	135	449
Celecelea	25	101	116	344	56	852	116	774
Central	13	33	30	106	17	232	42	217
Elenderea	18	51	34	155	25	352	68	366

Source: UBOS 2024 Census Report for West Nile

5.3.5 ACCESS TO HEALTH AND COMMON DISEASES

Access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease and makes an important contribution to economic progress, as healthy populations live longer, are more productive, and save more. In Uganda, Ministry of health is the principal actor in the delivery of health care services, but so are other government departments and agencies, development organizations implementing partners, civil society groups and communities themselves.

There are various NGOs both Local and International that are involved in AIDS prevention Koboko District has about 16 Health Units of different categories, some of them are Government Health facilities while others are owned by Non-Government Organizations. The District has 1 District Hospital which has not started operating fully, 7 HCIII (among these is 1 PNFP), 8 HCII making total of 16, 2 VHTs per village for 394 villages (778 VHTs). There are no health facilities along the selected roads in Koboko MC. One of the selected roads leads to the proposed site for construction of the district hospital.

Yumbe District has 30 operational health facilities, these include: 1 Regional Referral Hospital, 1 Health Centre IV and 10 Health Centre III's and the rest are Health Centre II's. There are two PNFP units in Yumbe namely; Lodonga H/C III and Kei H/C III. There are no health facilities along the selected town roads in Yumbe. Moyo District has a total of 42 functional health facilities namely; 1 Referral Hospital, 1 Health Centre IV and 12 Health Centre III and 28 Health Centre II.

5.3.6 ECONOMIC ACTIVITIES

Economic activities in the three urban centers of Koboko Municipality, Yumbe TC and Moyo TC are more inclined to commercial business enterprises and provision of services. Commercial enterprises range from large scale established whole sellers, through petty traders to roadside traders and market vendors. A relatively smaller section of individuals is involved in urban farming. Detailed information on livelihood activities within the municipality shall be profiled during the ESIA study.



Figure 5. 3 Roadside Petty Trader in Koboko, Small London.



Figure 5. 4 Commercial units in Koboko Municipality, Samuel Baba Road

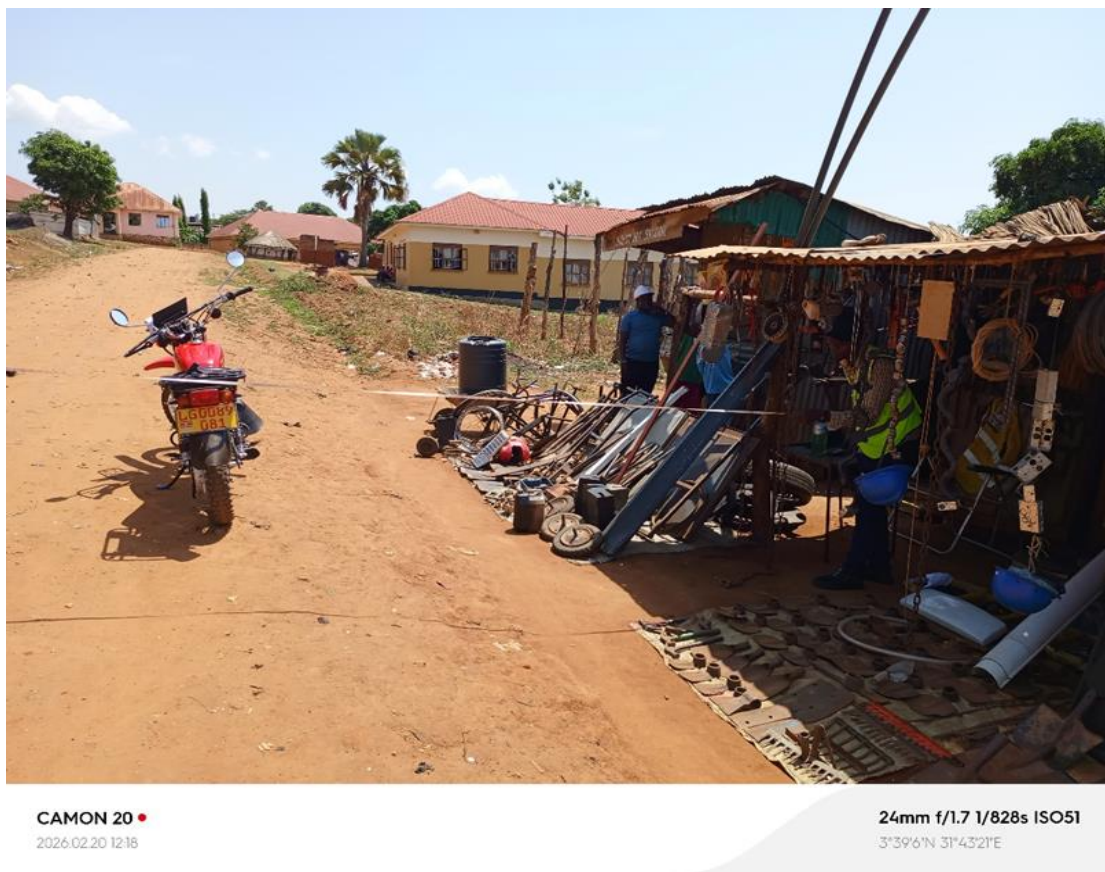


Figure 5. 5. Roadside Kiosk in Moyo TC

5.3.7 LAND TENURE

Land ownership in the Municipality and Town Councils comprises a mix of customary tenure and registered land (leasehold/freehold), with the municipal council actively managing public land and enforcing planning regulations through its Physical Planning Committee. Land is governed by the 1998 Land Act, with customary rights being dominant, alongside increasing formalization of title. Customary land is subject to traditional norms of the dominant ethnic groups thus the Kakwa, Aringa and Madi among others and is normally managed through clans and families. Succession and inheritance processes are thus very key in customary tenure system. Under this tenure arrangement, land ownership is vested in the lineage and is allocated by a father to his sons, who in turn, assign it to their wives and children for cultivation and construction of dwelling units. While in theory, it sounds as if no single individual or household owns land under such tenure arrangement, in practice the ownership is actually vested in the users. In every community, it is clear which portion of land belongs to which household, and usually the head of the household is recognized as the defacto owner. It is also the head of the household (land owner) who has the responsibility to rent or sell out portion of such land in case of need; though this is usually done after consultation with and the consent of the larger members of the lineage is obtained.

5.3.8 BUILDING STRUCTURES ALONG THE SELECTED ROADS IN THE STUDY AREA.

A physical inspection of the selected roads was undertaken in February 2026 in Koboko while the other TCs have also physical development plans. The main parameter assessed during the inspection were offset distances from the current center line of existing carriage way, nature of structure and current use. The scoping report presents a synoptic state of building structures along the selected roads.

- **Offset Distance from the centre line of existing carriage way.**

The official road corridor established by Koboko Municipality and the two town councils is 20ms. This corridor space applies to all roads. Results from the inspection reveal that the offset distances from the center line the majority of road section was between 11 -15m. Some sections had a ROW of 30m falling within National Standards. However, a few structures were found within an offset of 7-10m. Detailed offset data of structures will be presented in the full ESIA. An abridged record of the offset distances for structures deemed critical is appended to this scoping report. The Inspection conducted in Yumbe Town Council revealed no structures within the ROW that will encumber the project.

- **Building Materials and State of Structures.**

The state of structures and type of building materials used was documented during the inspection. Structures fall into roughly three (3) main categories thus

Permanent Structures: These are structures constructed using long lasting burnt clay or earth bricks. Also included are structures constructed using concrete blocks. Many of these structures were found to be in a good state. The majority of these structures were observed to be out of the ROW. However, there are structures whose fences are nearer the reserve.

Semi-Permanent Structures: These are structures constructed using a combination of mud and wattle for walls and roofed with iron roofs. These tend to be constructed nearer the ROW.

Temporary Structures: These are mainly makeshift shelters constructed to serve commercial interest. The majority in this category are kiosks constructed out of any material available. These are very close to the carriageway. However, many of them are easily movable, one factor that gives the owners a level of leverage in the event of change in location.



Figure 5. 6 Structures along Samuel Baba Road in Koboko TC

Structures along Samuel Baba Road one of the selected roads are a combination of permanent structures and Temporary ones. The ROW is quite clear on any structures.



Galaxy A13
20 February 2026 11:34



Galaxy A13
20 February 2026 11:38

Figure 5. 7 Image taken along Aliopa Road in Koboko.

The entire corridor on this road is quite clear of any structures average ROW is 20-30m.



Figure 5. 8 Structures Along Alli Kenyi Road in Kiboko.



Figure 5. 9 Structures along Selected Road in Moyo TC

5.3.9 ACCESS TO WATER

Koboko district is endowed with adequate surface and ground water resources. Within the Municipal Council a combination of stand pipes and boreholes supply water to almost all residents. The ESIA will enumerate all boreholes and stand pipes along the road. During the scoping study however, all water sources were out of the ROW and would hence not require relocation.



Figure 5. 10 Community water source in the project area

5.3.10 GENDER

Gender is a social construct of the different roles, responsibilities, and benefits of males and females, varying from place to place. In addition, these roles, responsibilities, and access and benefits change over time. Like in most cultures, men hold the power in the rural family setting in Uganda. Women and children take care of most domestic works, are the backbone of agricultural production in rural areas, and are unrecognized natural resource managers. In addition, they provide food, fuel, fodder, and water and act as conservationists, safeguarding forests, soil, water, and grazing areas. Population growth and pressures on a limited and increasingly degraded natural resource base, however, undermine the role of women as major resource users and managers.

Community members and local leaders in the proposed project area indicated during stakeholder engagement that women still have a limited voice over how resources are managed. Traditional and cultural beliefs do not favour women ownership of resources, including livestock. Yet women provide 70 to 80% of agricultural labour. Women's inaction in effectively participating in and taking advantage of available development opportunities is rooted in the unequal gender relations that restrain their social and production roles. Cultural practices limit the role that women can or aspire to play, inhibiting their ability to engage in economic activities to improve their incomes. What was clearly observable was the predominance of women in petty road side trade involving low value products especially agroproducts.

6.0 PRELIMINARY STAKEHOLDER CONSULTATIONS.

6.1 INTRODUCTION

The Ministry of Works and Transport (MoWT) on behalf of the Government of Uganda is upgrading selected roads in Koboko, Yumbe and Moyo towns complementary infrastructure of the Koboko-Yumbe-Moyo road (103.08km). The Ministry in collaboration with the Urban Councils has identified selected roads presented in the table below

SN	District	Town/Municipal Council	Selected Urban Road
	Koboko	Koboko	
	Yumbe	Yumbe	
	Moyo	Moyo	

To guide structured engagements with all key Stakeholders, a Stakeholder Engagement Plan (SEP) will be designed by the consulting team after the scoping phase. The SEP will be prepared following guidelines of the World Bank ESS 10 on Stakeholder Engagement and Information Disclosure and the National Environment Act Cap 181 together with the National Environment (Environment and Social Assessment) Regulations 2020.

6.2 PURPOSE AND OBJECTIVES OF STAKEHOLDER ENGAGEMENT PLAN (SEP)

The purpose of the Stakeholder Engagement Plan is to guide engagement and information disclosure of the proposed selected town roads upgrade project in Koboko, Yumbe and Moyo urban areas. The SEP identifies key stakeholders, information required by each category and how they will be engaged during the entire ESIA process. Overall stakeholder engagement is instrumental in creating awareness on the project and further solicit views and concerns from the different categories of stakeholders such that appropriate decisions are made by the project design team and by the different categories of Stakeholders.

The SEP will be guided by the following objectives:

- Identify key stakeholders in the selection and upgrade of the selected town roads.
- Design a framework for stakeholder engagement that meets National legal and Bank ESS requirements.
- Facilitate the identification and documentation of issues, concerns and views from project stakeholders
- Present the approach used to disclose relevant project information

6.3 STAKEHOLDER IDENTIFICATION AND ANALYSIS

Stakeholder identification and analysis will be undertaken to aid MoWT obtain information on concerns, views, mandates and understand the interests of all stakeholders and how they may influence the proposed project. Stakeholder Consultation will be guided by the program outlined in the matrix below

6.3.1 PROPOSED STAKEHOLDER MAPPING AND ANALYSIS AND ENGAGEMENT METHODS

Preliminary Stakeholder Engagement for the selected town roads has identified a number of stakeholders at the National Level, District Local Governments, Town administrations. These have been analyzed in terms of their mandates, concerns and interests. The matrix below presents the categorization of stakeholders, their interests and proposed method of consultation.

Table 6. 1 Stakeholder Mapping, Analysis and Engagement Method

Stakeholder Category	Stakeholder	Stakeholder Interest/Mandate	Engagement Method
National level Regulatory Agencies	Ministry of Gender, Labour and Social Development (MoGLSD)	<ul style="list-style-type: none"> Monitoring Aspects of Gender Inclusion and GBV Ensure observation of rights of all vulnerable groups Enforce labour laws and regulations Register and license workplaces, monitor all work places Promote Occupational Health and safety at the quarry License all equipment to be used at the quarry. Supervise work councils 	<ul style="list-style-type: none"> Formal meetings
	Ministry of Water and Environment (MWE)	<ul style="list-style-type: none"> Assess and monitor water use from natural water bodies and aquifers and regulate its use License all forms of water abstraction to be used at during road construction. Ensures implementation and monitoring of project activities. 	<ul style="list-style-type: none"> Formal meetings
	NEMA	<ul style="list-style-type: none"> Approval of Scoping Report and Terms of Reference Enforcing Environment and Social Assessments and audits of the facility Undertaking monitoring of certification conditions Issues permits and approvals Handles all matters related to Coordinating other sectors on matters of Environment Management on the project. 	<ul style="list-style-type: none"> Review of Written reports Consultations on permitting conditions where necessary

<p>Local Government (Koboko, Yumbe & Moyo Districts)</p>	<p>District:</p> <ul style="list-style-type: none"> • Chief Administrative Officer (CAO) • District Environment Officer (DEO) • District Community Development Officer (DCDO) • District Engineer (DE) • District Physical Planners • District Natural Resources Officer (DNROs) • District Chairperson • District Labour Officer 	<ul style="list-style-type: none"> • Enforce compliance with Environment and social safeguards during construction • Support in the mobilization and engagement of community/beneficiary stakeholders. 	<ul style="list-style-type: none"> • Formal meetings • Interviews • Site Visits • Review of reports
<p>Municipal/ Town</p>	<ul style="list-style-type: none"> • Municipalities/ Town Councils • Town Mayors • Town Clerks • Town Physical Planners • Town Engineers • Environment Officers • Community Development officers • Local Council II Chairpersons. • Parish Chief/Ward agents. 	<ul style="list-style-type: none"> • Participate in making decisions that may affect the project. • Participate in project supervision • Support during identification of the location for the water and sanitation facilities. • Mandated to oversee all the construction activities • Monitor the Environmental, Social, Health and safety aspects. 	<ul style="list-style-type: none"> • Formal meetings • Interviews • Site Visits • Review of reports
<p>Community groups settled along the selected roads</p>	<ul style="list-style-type: none"> • Landlord • Tenants • Business community • PWDs • Men • Youth • Women and • Elderly. 	<ul style="list-style-type: none"> • Participate in project meetings and activities. • Provide land for the project. • Participate in the ESIA 	<ul style="list-style-type: none"> • Meetings • Site visits • Interviews • Focus group discussions • Surveys

6.4 STRATEGY FOR CONSULTING AND INCORPORATING VIEWS OF VULNERABLE STAKEHOLDERS

Preliminary interface with the project area recognizes the existence of vulnerable groups including women, the youth, refugees, road side traders and disabled people. Consultations with vulnerable groups will be based on recognition of their specific needs. The matrix below explains the specific approaches to be used to consult specific categories of vulnerable groups.

Table 6. 2 Strategies for incorporating Views of Vulnerable People

Venerable Group	Form of Consultation	Venues	Observations
Women and the Youth	<ul style="list-style-type: none"> • Gender Segregated Meetings • Individual interface with female community opinion drivers • Focus groups Discussions with gender biases 	Homesteads Community trading center	Preliminary consultations have taken place, further consultation will be undertaken during the ESIA studies
People with disabilities	<ul style="list-style-type: none"> • Site based through scouting • Interface with interest groups for different disability groups • Interface with opinion drivers within the different groups of people living with disabilities 	Homesteads Community Centers	Preliminary consultations have taken place, further consultation will be undertaken during the ESIA studies Focus will be more on PWD living long the selected roads
Road Side Traders	<ul style="list-style-type: none"> • Interviews • Focused Group Discussions 		
Refugees	<ul style="list-style-type: none"> • Individualized interaction with Refugees (where possible) • Interviews with Refugees 	Refugee settlement	Their participation will depend on the final candidate list of roads

6.5 STRATEGY FOR INFORMATION DISCLOSURE

Information disclosure on the selected town roads will be localized to the direct impact areas, due to their limited linear spatial extent. The main approach will be through community meetings during initial contact meetings with the community followed by follow up meetings to obtain the considered views on information given during the initial contact meetings. At the district, municipalities and town council level, disclosure will be

made during the interactive meetings where the project designs and operations will be presented.

6.6 PRELIMINARY STAKEHOLDER CONSULTATIONS

Stakeholder consultation and disclosure is a key requirement of the ESIA process. Development projects affect different groups of people in different ways. Through consultations and disclosure, developers are availed an opportunity to allay any fears, anxieties and negative attitudes that may exist within the surrounding public and the wider spectrum of stakeholders. Stakeholder consultation aims at mitigating many of the biophysical and socio-economic impacts that may be associated with the development. Through consultations and disclosure, stakeholders are brought on board early enough and can air out their concerns such that they are addressed early in the project cycle.

In compliance with the National Environmental Act Cap 181 and the National Environment (Environment and Social Assessment) Regulations 2020, preliminary consultations were undertaken. The preliminary consultations were aimed at:

- Introducing the project and its objective to the district, municipality and town council leadership.
- To seek their views and concerns on the proposed road construction project.
- To enable MoWT identify both positive and negative environment and social impacts associated with the proposed project such that appropriate enhancement and mitigations measures are incorporated in their processes.
- Incorporating views from stakeholders into the project design to enhance environmental sustainability.

A two-tiered approach was used to conduct preliminary consultations with stakeholders. A consultative approach was used to seek views from District Local Government officials and the local leadership at LCIII, LC II and LC I levels, while focused discussions, consultative meetings and personal interviews were used to seek views from residents along the selected roads.

6.7 PRELIMINARY ISSUES RAISED DURING STAKEHOLDER CONSULTATION.

Preliminary engagement with the key stakeholders is key in informing the scoping report and drafting comprehensive Terms of Reference. Consultations were carried out by the ESIA consulting Team, MoWT Project Implementation Unit (PIU) and the Environment and Social Safeguards Team of the Engineer, Community Liaison Officers (CLOs) from the Client and EHSS personnel of the contractor. The scoping study undertook a consultative meeting and minutes of the meeting are contained in the table below.

Table 6. 3 Stakeholder Engagement Meeting Minutes on the Proposed Town Roads in Koboko, Yumbe and Moyo Held on 19/02/2026.

AGENDA

<ol style="list-style-type: none"> 1. Prayer 2. Self introduction 3. Opening Remarks from ministry of works 4. Communication from Gaf consultant 5. Communication from ESIA consultant 6. Communication from the stakeholders 7. Action points 8. Closing remarks by the consultants 		
Min.	Discussion, Issues and Decision	Actions
Min. 1	<p>Opening prayer Opening prayer was led by the CLO Koboko who thanked God for the gathering and turning up of members to the meeting and working hard for the development of the area.</p>	All
Min. 2	<p>Self introduction All members introduced themselves by their names and titles and the district.</p>	All
Min 3	<p>Opening remarks by the ministry of works He started with thank and welcoming members to the meeting and turning up in big numbers since each district has got a representation.</p> <p>He informed the meeting that there a successful bank mission visit to the site and proposed town roads in all the three districts and refugee roads.</p> <p>Informed the meeting that the project has three slots ie road side markets, access roads and town roads all are being followed up by the world bank. But for today the meeting is on town roads and the scope of work must be done immediately by the consultant and may issues has to be put into consideration since the bank already visited the sites and observed a number of encumbrances.</p> <p>More so the consultant had started doing his work and covered a lot yet the bank is only to consider 5Km for each town or district.</p> <p>The consultant has been requested to do focused scope and on some town roads i.e. in koboko it was observed that there are community businesses and occupants in the right of way and feels a process has to be followed.</p> <p>We have to discuss those guidelines and engagements so that the community can freely donate or quite the right of way. This must be evidenced with attendance lists, and minutes of the engagements and individual consent obtained.</p> <p>From the field observations, there are some kiosks and homes which need serious engagement and we need to go back select roads that are free from encumbrances. The scoping consultant will guide us on the people with primary residences or business eg on Katumba Wamala Road Requested a form to capture residences, schools, cameras, that are going to be affected by the road works. The design is 9m wide wjich takes up 6m carriage way, a walk way and drainage system. Wished members fruitful discussions</p>	
Min 3	<p>Remarks by the consultant Gaf</p>	

	<p>The consultant welcomed members for the engagement meeting that the world bank is preparing the construct some town roads with in their District/Municipality. Since the opportunity is on, do we have enough space to construct the roads with all what we want?</p> <p>Economic and physical displacement of people is where we need to focus on. So we need to revisit the sites and select clear roads since the ministry has no funding for compensation.</p> <p>The local authority should take on the task of who is signing the consent and engagement so we require their support.</p>	
Min 3	<p>Remarks from the ESIA Consultant</p> <p>He started with welcoming members to the meeting and thanked them for full representation from districts.</p> <p>Informed that meeting that as consultants, they have been on ground because the selected roads length is higher greater that what the will fund. Some roads are encumbered and not yet opened which require allot of attention and community engagements.</p> <p>Some date will be eliminated because in some town councils they denied consultant access to the sites simply because the list had only 2.5km yet in the district meeting they agreed 5km.</p>	
Min 4	<p>Reactions/ input from stakeholders Koboko district by the secretary of works</p> <p>For Koboko district all roads are wide enough up to 20m including the road reserve with power lines and water lines.</p> <p>All koboko road reserves have mark stones on every road for separating the community from the road reserve and to avoid encroachment by the community members.</p> <p>The roads with illegal structures can be replaced with those that are free from encroachers.</p> <p>More so community engagements by the local leaders started and people are welcoming the project.</p> <p>Physical planner yumbe</p> <p>Since the stretch of roads has been reduced, their priority road from the start has been the ring road. But yumbe as a town council has 40km roads with cleaer right of way. All people who settle in the right of way have consents and can vacate straight away.</p> <p>All roads are clearly opened and there are no challenges on them because themselves are wide enough.</p>	

	<p>For those community members who are in the right of way for those selected roads, we need a time frame to avail all this information and there are no major displacements.</p> <p>Informed the meeting that yumbere roads are very insecure at night and needs lighting in relation to the design.</p> <p>The Y junction road to bidibidi, the road was initially to start from Juakali junction to bidibidi but the bank refused that the scope of work is big so the resorted back to the y junction yet JICA had a 2km project there. So the two parties have to seat and harmonize that.</p> <p>So the scope of have to be adjusted and work on the design that can fit into JICA 2km road and KYM since they left 720m from the junction as Zhongmei was still ferrying maram from the same direction and the project was expiring and they could not wait.</p> <p>The wish list was already given to the PIU and many stakeholders are already focused on the project.</p> <p>The town councils has already signed consents and need to be seen by the consultant and how to report the affected persons.</p> <p>We need to anticipate risks so that incase in future it crops up, it can easily be delt with and the bank is already in the know so need for proper documentations.</p> <p>Moyo District</p> <p>All roads in moyo are existing roads and have the right of way of 20m wide</p> <p>Access roads to institutions and homesteads should be well constructed to avoid community complaints.</p> <p>Requested for closed drainage system to avoid issues of safety and accidents</p> <p>For the existing infrastructure like solar street lights, culverts etc the contractor should allow them relocate them prior to construction works start as they can be used on other roads.</p> <p>Road management garbage areas should be maintained if not new ones be constructed.</p> <p>Sound and noise pollution should be avoided since all the construction roads are within highly populated areas.</p> <p>Width design should remain 7m to avoid traffic issues and 2.5m drainage since the towns are growing and the population also increasing.</p> <p>Security cameras and security lights should be installed on all the constructed streets since the town people work the whole night.</p> <p>Islands and greenery should be identified, restored and constructed with trees planted on all streets.</p>	
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	<p>Service ducts for water lines, telecommunication lines should be constructed and well positioned to allow continued service delivery to the community.</p> <p>Access roads to institutions and homesteads should be well constructed to avoid community complaints.</p> <p>Requested for closed drainage system to avoid issues of safety and accidents</p>	
Min 4	<p>Communication from the secretary works</p> <p>Welcomed members to the meeting and for always consulting them and encouraged to keep doing the same.</p> <p>He emphasized that Katumba wamala road must be among the roads to get tarmac because he selected that road himself and did a lot of things for the district during peace keeping in the area.</p> <p>Since the road is constructed on land, there is physical interaction with it</p> <p>Issues of noise pollution, air pollution, dust should be minimized as since the construction roads are within town</p> <p>There is interaction of workers with the community which result into cases like gender based violence, child labour, HIV/AIDS, all these should be taken care of.</p> <p>Employment of local people should be considered as many youths in moyo are still un employed.</p> <p>This road construction will affect business along the stretch especially those working in the town corridors</p> <p>Speed humps should be installed to avoid motorists from over speeding Durable dustbins should be installed since their town had some to avoid littering the town</p>	All
Min 5	<p>Action Points</p> <p>He requested that during the start of the project, as leaders should be notified early so that they can engage the community about the progress of works.</p> <p>Local leaders should champion the exercise of community engagement since they are muck known to them.</p> <p>Leaders should select roads that are free from encumbrances to avoid the project from being blocked or risking it.</p> <p>PIU, Consultant should harmonize with JICA on the road design to bidibidi from the Y- junction.</p> <p>Site specific assessment be done by the ESIA consultant to confirm the proper right of way and encumbrances.</p>	All
Min 6	<p>The meeting was adjourned and proceeded to the field for assessment in Yumbe by the ESIA consultant.</p>	ESIA consultant and yumbe leaders

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SN	ADMINISTRATIVE UNIT	KEY CONCERNS	Responses from the Consulting Team and MoWT
	KOBOKO Municipality (10/02/2026)	<p>Town clerk</p> <ul style="list-style-type: none"> • The terrain of Koboko is gently sloping and the drainage system must be aligned and covered and walk ways well constructed. • The design should cater for speed humps to reduce the high risk of accidents due to over speeding. • The design must adhere to urban design specification since Koboko aspires to become a city proper municipality, their plan is to join the City • The town clerk stated that there are very many roads that need to be constructed but they selected a few because the scope was also small. • All roads in Koboko have the right of way of 20m wide and are free from community occupancy. • The town clerk also emphasized that the PAPs 	<p>The design will follow the urban roads design and all drainage structures shall be covered</p> <p>Speed control humps will be introduced at all identified service areas</p> <p>The ROW will be verified during inspections</p> <p>The construction of service ducts will be communicated to the Engineering design team</p> <p>All installed infrastructure like culverts are handed over to the municipality as a practice</p> <p>Accesses shall be considered in the design</p> <p>Employment opportunities will be</p>

		<p>are well engaged and know the developments are coming soon in their area and are willing to cooperate and give support where necessary.</p> <ul style="list-style-type: none"> • Security lights should be installed on all the constructed streets since the town people work the whole night. • Islands and greenery should be identified, restored and planted with trees planted on all streets. • Service ducts for water lines, telecommunication lines should be constructed and well positioned to allow continued service delivery to the community. • Access roads to institutions and homesteads should be well constructed to avoid community complaints. • Requested for closed drainage system to avoid issues of safety and accidents • Boda Boda stages should be constructed and increased on all streets. More so with zebra crossing for safety reasons. 	<p>given to residents as first priority</p> <p>The design team and the ministry will respect the choice of Katumba Wamala road subject to approval</p> <p>Noise and Dust pollution shall be monitored during construction .</p> <p>The design will take care of waste management facilities along the roads</p> <p>Tree planting will be considered together with green spaces but all this will depend on space available</p>
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		<ul style="list-style-type: none"> • Allow the municipality to recover existing infrastructure like solar street lights, culverts etc. • Koboko has over 12,000 self settled refugees in the community and now that calls for a policy amendment to recognize them because they all depend on district resources yet no support from agencies. <p>Secretary of Works Koboko Municipality</p> <ul style="list-style-type: none"> • He emphasized that Katumba Wamala road must be among the roads to get tarmac because he selected that road himself and did a lot of things for the district during peace keeping in the area. • Issues of noise pollution, air pollution, dust should be minimized • The team should consider issues of Gender Based Violence, Child Labour, HIV/AIDS, all these should be taken care of. • Employment of local people should be considered as many youths in Koboko are still un employed. • This road construction will affect business along the stretch especially those 	
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		<p>working in the town corridors</p> <ul style="list-style-type: none"> • Speed humps should be installed to avoid motorists from over speeding • Durable dustbins should be installed since their town had some to avoid littering the town. • Destroyed trees during construction should be re planted. 	
2	Yumbe District and Town Council (09/02/2026)	<p>The District physical planner</p> <ul style="list-style-type: none"> • Stated that are multiple roads that need to be constructed but they have selected a few of them including the ring road. • All the selected roads in Yumbe have the right of way of 20m wide and are free from community occupancy. Any people who have occupied the ROW illegally have already been engaged • Requested for wider roads with covered drainage • Install security lights on all the constructed streets for security especially at night • Requested for greening the street • Service ducts for water lines, telecommunication lines should be constructed and well positioned to allow continued service delivery to the community 	<p>The ROW will be verified during inspections</p> <p>The construction of service ducts will be communicated to the Engineering design team</p> <p>Tree planting will be considered together with green spaces but all this will depend on space available</p>

		<ul style="list-style-type: none"> • Provide access roads to institutions and homesteads 	
		<p>Mayor Yumbe Town Council</p> <ul style="list-style-type: none"> • He requested that leaders should be notified when the project will begin so that they engage the community • Consider employment of the local community • Issues of gender equality and equity should be respected • Few roads have been submitted for consideration but in case of resource availability, we are ready to submitted more roads. The T/C needs to improve the road network since it's aspiring to become a municipality 	<p>Leader will be notified when the project goes through and the proposed project commencement</p> <p>Employment opportunities will be given to residents as first priority</p> <p>Gender issues are taken serious and there is normally a consultant hired to handle such issues including GBV</p>
		<p>Engineer Yumbe Town Council</p> <ul style="list-style-type: none"> • We are expecting the best road the government can give us • Carriage way is 10m and 5m, reserve. We are expecting wide roads so as to minimize traffic challenges in future • Pay special attention to drainage, we have low lying areas • Requests for greening the town roads • Sensitizing the community since there in no compasation 	<p>The design will follow the urban roads design</p> <p>The ROW will be verified during inspections</p> <p>Drainage concern will be communicated to the design team</p> <p>Tree planting will be considered together with green spaces but all this will depend on space available</p> <p>Leaders are advised to engage the community</p>

3	Moyo District and Town Council (10/02/2026)	<p>CAO/Town clerk</p> <ul style="list-style-type: none"> • Stated that district agreed on priority roads for construction and the town council is planning to be elevated to a municipality status. 	<p>Priority roads have been received and the team is on ground to conduct assessments on the selected</p>
		<p>Environment officer</p> <ul style="list-style-type: none"> • Issues of noise, air and dust pollution should be minimized since the roads are within town • Mitigation measures for soil erosion due to bush clearing • If any of the roads go through a wetland, biodiversity loss should be minimized 	<p>Noise and Dust pollution shall be monitored during construction</p> <p>Mitigation measure for soil erosion and biodiversity loss will be proposed. The team will do assessment to identify any wetlands that are likely to be affected</p>
		<p>Community Development Officer</p> <ul style="list-style-type: none"> • Issues of GBV, child labour, HIV/AIDS that are a result interaction between the community and works should be taken care of • Employment of local people especially the unemployed youth in Moyo • Impact on business especially those working in the town corridors • Theft issues should be taken care of during planning 	<p>These issues are taken serious and there is normally a consultant hired to handle such social issues</p> <p>Employment opportunities will be given to residents as first priority. Youth should be encouraged to apply when opportunities arise</p> <p>Inspection will be made to identify the affected business and be planned for</p>
		<p>Town engineer</p> <ul style="list-style-type: none"> • Said that there are multiple roads that need to be constructed but they selected a few of them basing on their priority. 	<p>Priority roads received</p> <p>The construction of service ducts will be communicated to the</p>

		<ul style="list-style-type: none"> • All selected roads have a right of way of 20m and free from encumbrances • Emphasized that the community engagements have started and those occupying the reserve are ready to leave • Requested for wider roads with covered drainage and walkways • Installation of security light • Tree planting • Construction of service ducts • Construction of access roads to institutions and homes • Consider including bodaboda stages in the design • Existing infrastructure like solar street lights, culverts etc the contractor should allow the town council to relocate them prior to construction works start 	<p>Engineering design team</p> <p>All installed infrastructure like culverts are handed over to the town council as a practice</p>
		<p>Senior Health inspector</p> <ul style="list-style-type: none"> • Requests for installation of speed humps to control over speeding • Installation of Durable dustbins • Replacing of lost tree 	<p>Speed control humps will be introduced at all identified service areas</p> <p>Consideration of bins will be looked into</p> <p>Tree planting will be considered together with green spaces but all this will depend on space available</p>

7.0 ANALYSIS OF PROJECT ALTERNATIVES

The preliminary design concept intimates a number of design options for the selected town roads. Preliminary discussions and site inspections point site sensitive designs based on individual road section site appreciation. Different roads shall be designed taking into account existing topographical features, ecological sensitivities, geotechnical considerations and existing structures and socio-economic infrastructure. The design shall aim at optimizing available space, enhance safety, minimize ecological impact and avoid unnecessary displacement of residents and their sources of livelihoods.

The development of design options will be based on a number of strategic considerations:

- i. The existing roads are located in urban areas.
- ii. The selected roads are gazetted by the respective councils as urban roads.
- iii. Limited encroachment on the reserves has occurred and those having temporary kiosks are aware. s.
- iv. Terrain considerations, drainage channels, or railway lines impose no constraints.
- v. Maximum utilisation of the existing road and the current RoW.
- vi. No land acquisition is required
- vii. Relocation of temporary Kiosks shall be carried out
- viii. Sensitivity to expectations of the local communities eagerly anticipating the development of the existing road to bituminous standard.

7.1 ZERO ALTERNATIVE

The “Zero Option” refers to not implementing the proposed project at all. This alternative would imply that the current status quo would continue. The existing road will continue to operate under current design parameters and maintenance regime. Periodic gravelling and associated borrow pit excavations will continue to be key features of the road, together with safety challenge and pollution of environmental resources. It is important to note that the Zero Alternative is the baseline against which all other alternatives and the development proposals will be assessed. When considering the Zero alternative the impacts especially positive ones, associated with any specific alternative or the development proposal would not occur and in effect the impacts of the Zero Alternative are therefore inadvertently assessed by assessing the other alternatives. In addition to the direct implications of retaining the status quo there are certain indirect impacts, which may occur should the Zero alternative be followed.

The Zero Alternative option will for all selected town roads will slow down any prospective development initiatives and perpetuate insecurity within the communities traversed. Connectivity and mobility will remain a challenge especially at night because of lack of lighting. The carriageways are lacerated and require periodic maintenance and drainage is lacking on all roads. All drainage structures have disintegrated and deteriorated in many parts hence in their current status, the roads attract incremental costs in repairs. Frequent maintenance and gravel extraction pose financial and environmental costs. Due to the very

poor state of the selected roads, safety is low and security compromised. Maintaining the zero option will constrain access to social services.

7.2 MAINTAINING THE EXISTING ALIGNMENT ALTERNATIVES (NO RE ALIGNMENT)

The No re-alignment alternatives will apply to all selected roads. The No re-alignment alternative will maintain the existing footprint of the selected roads without any changes in alignment. The project will constitute improvement of road pavement, drainage structures and furniture following exactly the current carriageways. This will not require extra land take while improving mobility and safety on the roads. Much as maintaining current alignment of all the selected roads with sharp curves and T junctions has may an effect on road safety, the speed limits on these roads is very low, normally below 30km per hour. The low speed limits coupled with introduction of speed calming infrastructure will enhance road safety irrespective of the curves and type of junctions. The selected roads have are gazetted roads on the physical development plans of the respective towns. This alternative was therefore deemed viable by the Project Design team.

7.3 MINOR RE-ALIGNMENT ALTERNATIVE (STRATEGIC REALIGNMENT OF THE EXISTING ROUTE ALIGNMENT)

Minor realignments alternative will not make major realignments to the existing road alignment. Realignments will be mainly considered on account of community and road user safety through elimination of curves. The minor realignment alternative will focus on applying deviations especially at locations with sharp curves and junctions. The option will apply mitigation measures on the existing alignment that would improve road safety. However, these minor deviation alternatives will impact on existing ribbon-development patterns along the road (Kiosks, Commercial buildings and other structures). Adopting this alternative will imply compensation and resettlement of a few affected persons. Resource constraints will limit the viability of this option.

Table 7. 1: Comparative Evaluation of Alternatives

Key Environmental and Social Components	Zero Option	Alignment Alternatives	
		1 No Re-alignment Alternative	2 Minor Re-alignment alternatives option
Socio-economic Parameters			
Land use	Status Quo remains (0)	No changes due to ROW specifications (1)	Minimal land use change, affected properties due to ROW (-1)
Land take	No land take and status quo remains (0)	No Virgin land off the alignment will be required (0)	Additional land to be taken sharp curves (-2)

Key Environmental and Social Components	Zero Option	Alignment Alternatives	
		1 No Re-alignment Alternative	2 Minor Re-alignment alternatives option
Impact on commercial centers	Status Quo remains – stagnating economic development, due to lack of regional access (-3)	Since the ROW remains there will be no impact on commercial and residential properties (-1)	Loss of Business opportunities especially (-3)
Demolition of structures	No structure is affected (0)	Demolition will be limited to removal of a few Kiosks (-1)	Re-alignment to avoid major infrastructures will affect structures (-3)
Impacts on Gender	Status quo remains (0)	Gender impacts associated with resettlement and loss of land will be avoided (+3)	Gender Impacts associated relocation without livelihood support will increase (+2)
Impacts on urban infrastructure and Utilities	Routine maintenance of infrastructure will be maintained and may increase due to ageing (-1)	Urban infrastructure will be replaced including power lines, water pipes and telecom lines (+2)	Urban infrastructure will be replaced including power lines, water and telecom but can be mitigated (+2)
Environment and Safety Parameters			
Traffic management in urban centers	Traffic management will continue being quite chaotic but limited (+1)	Increased traffic shall be managed through introduction of speed calming measures (+3)	Speed calming facilities will be introduced to manage through traffic (+3)
Impacts on wetlands/urban environments	Increased siltation on account of seasonal transportation of eroded sediments	Impacts will remain as assessed since no diversion is planned at only site	Increased siltation on surface water courses shall be experienced

Key Environmental and Social Components	Zero Option	Alignment Alternatives	
		1 No Re-alignment Alternative	2 Minor Re-alignment alternatives option
	from the carriage way (-2)	construction impacts at these points (-2)	(-2)
Safety during and after construction	Status Quo remains (0)	Safety signage and associated infrastructure shall be installed (+3)	Safety signage and associated infrastructure shall be installed (+3)
Surface Drainage along the carriageway in urban centers	Status quo remains and will worsen (-3)	Covered drains shall be introduced (+3)	Covered drains shall be introduced (+3)
Trees along the alignment	There will be no tree felling (+3)	Trees along the alignment could be lost due to site construction works (-1)	Potential to take trees off through realignment and site construction works (-2)
Cumulative Impacts associated with concurrent development projects	No additional impacts since status quo remains (0)	Minimum impact on concurrent developments including communication infrastructure and power lines. Where deviations occur other infrastructure may not share the corridor (-1)	Relocation of services lines will occur during construction leading to costs. However, permanent acquisition of the corridor will mean easing development and maintenance of all infrastructure facilities along the road hence becoming a benefit (+3)
Borrow areas	Increased demand for gravel shall lead to perpetual opening of Borrow areas for the entire project life	Borrow areas shall be opened during the construction phase, these will be restored and cease after construction	Borrow areas shall be opened during the construction phase, these will be restored and cease after construction (-1)

Key Environmental and Social Components	Zero Option	Alignment Alternatives	
		1 No Re-alignment Alternative	2 Minor Re-alignment alternatives option
	(-3)	(-1)	
Total Score	(-8)	(+5)	(+1)

The No Re-alignment alternative is the most viable option selected at this level. For any alternative to be considered feasible such an alternative must meet the project objectives of the development proposal without presenting significantly high associated impacts.

8.0 PRELIMINARY IMPACT IDENTIFICATION

8.1 POTENTIAL POSITIVE IMPACTS

Positive impacts accruing to the selected roads upgrade project will be realized during the Pre – construction, construction and operational phase. Following the scoping exercise the following have been identified.

8.1.1 PRE CONSTRUCTION POSITIVE IMPACTS

8.1.1.1 EMPLOYMENT OPPORTUNITIES

Pre construction employment opportunities will be quite limited in number and only for professionals. These will be most likely experts drawn from international and national level consulting firms. The likelihood of this impact occurring is high but the magnitude is very low since very few or no local people will be employed. Impact significance is hence Minor. The impact will hence not require further assessment.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement

The Consulting teams shall undertake to advertise the impending road planning phase within the project area through mass media and Local Government Structures. Temporary nonskilled jobs shall be reserved for local residents along the alignment.

8.1.1.2 SKILLS DEVELOPMENT AMONG LOCAL RESIDENTS

Preconstruction jobs are highly skilled jobs requiring personnel with significant levels of advanced training in various fields. However, the possibility of recruiting local field assistants exists. The likelihood of this impact occurring is hence very low, while impact magnitude is also very low since a few or no youths will be employed as assistants. The significance of this impact is hence negligible.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Impact Enhancement

- a. Implement the policy on employment of local residents that requires 30% of the work force to be drawn from project districts.
- b. Sensitize people especially youths on non-monetary benefits accruing to employment on road construction project including skills development.
- c. Design employment contracts that guarantee employees progressive placements that facilitate skills development

8.1.2 CONSTRUCTION PHASE

8.1.2.1 EMPLOYMENT OPPORTUNITIES

The selected town roads for upgrade are situated in densely populated urban settings with very few avenues for gainful public sector employment for the urban youths. Much as the roads will not offer employment to all job seeking individuals, it will nevertheless offer opportunities to the many unskilled youths in need of cash incomes.

While the design and feasibility studies phase has provided financial benefit and employment for mainly skilled local and foreign consultants, many of these are non-resident. The construction phase is bound to provide more employment avenues to local people. Contract provisions for road construction require 30% of the labour force to be drawn from the local population with particular emphasis on women. Since the contract will last for about 1 year, the project is expected to provide job opportunities for local people within the 3 towns. The requirement is for the selected contractor to advertise available opportunities within the project town using appropriate media available including local township display boards and local radio stations among others. Districts within the project area indicated during field work that labour on the project should be sourced within their boundaries. The likelihood of this impact occurring is ranked as **high** and level of impact magnitude as **high** given the number of nonskilled workers that will be required. This is an impact of **major** significance. The impact will be escalated to further assessment during the full impact study.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement

The contractor shall be required to involve local leaders and the district local governments in the recruitment process to ensure full and fair participation of local communities. Positive gender discrimination should be applied to offer women jobs in line with their competences. The following shall be specifically implemented

- a) Available job opportunities be disclosed in public places/notices.
- b) Contractor to involve local leaders and the District Local Governments in the recruitment process to ensure full and fair participation of local people; and
- c) Deliberate ring fencing some jobs for women

8.1.2.2 SHORT-TERM ROADSIDE BUSINESS OPPORTUNITIES FOR WOMEN

The viability of short-term roadside business during road construction constitutes a positive impact. Road construction will support existing roadside businesses mostly owned by women, such as vending food and sale of basic household items to construction workers. These are quite small units serving resident local population and are predicted to serve construction workers on site. Although short-term and reversible, this is a positive impact to women (and their households) and likelihood of occurrence is **Medium**. Level of Impact magnitude is however **low** since it is a short-term impact and easily reversible. Impact significance is ranked as **moderate**. Much as the impact is of moderate significance, given the need for positive affirmative actions for gender emancipation and the possibility of providing a “nursery” for nurturing business skills, this impact shall be escalated to further assessment with a view to articulating enhancement measures.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement

This is a short term and reversible impact with a potential to be enhanced through complementary development initiatives. Deliberate initiatives can be initiated to support overall socioeconomic development:

- a) The contractor shall control dust during road construction to avoid effect to roadside businesses and markets especially ones involved in vending foodstuff.
- b) The contractor will further endeavor to provide eating shelters at work sites.

8.1.2.3 SOURCING OF CONSTRUCTION MATERIALS

Sourcing of earth road construction materials is one of the positive impacts associated with road development during the construction phase. Construction of the selected town roads will require considerable volumes of construction materials including gravel aggregate, sand, among others. Other materials include lime, bitumen, cement, and steel especially for culverts among others. Procurement of these earth materials will provide income to suppliers and owners of land where borrow areas will be located. This is a positive impact with likelihood of occurrence ranked as **high** since all mentioned materials will be required and hence procured, however magnitude of impact is **low** since only low value place based inputs including gravel, rock products and sand will be procured locally while high value products will be sourced from distant manufactures. Incomes will further be realized by a few land owners. Rock quarries have already been established by the contractor and are expected to supply rock materials for construction of these selected town roads. The impact is thus short-term, reversible and of **moderate** significance. The impact will be escalated on impacts associated with gravel borrow areas.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Impact enhancement

- a. All material source areas including stone quarries shall carry out appropriate levels of standalone Environmental and Social Impact Assessments.
- b. Earth materials procurement contracts should be reviewed by competent legal practitioners under the overall supervision of the Consultant to avoid taking advantage of landowners where borrow pits and rock quarries are located.
- c. Contracts should specifically bind the contract to restoration of completed or abandoned borrow pits and quarry sites.
- d. Site restoration should be undertaken in line with procedures as specified in UNRA and National guidelines.
- e. All contracts for material source areas shall be witnessed by Local Council chairpersons in consultation with the District Environment and Community Development offices.
- f. Periodic monitoring to be specified in the CESMP shall be undertaken to ensure environmental and social integrity of material source areas.

8.1.2.4 RENTAL INCOME TO WORK CAMP, EQUIPMENT YARD SITE OWNERS AND TENEMENTS.

Establishment of work camps, equipment yard together with rent derived from tenements shall constitute an income to local residents. Owners of land on which these facilities which the three camps (Koboko, Yumbe and Moyo) have been erected will earn a rental income negotiated with the contractor. This is a positive but short-term and reversible benefit ceasing with project completion or whenever such facilities are no longer required in a given location.

Impact duration will be short-term for each site and property used as work camp or equipment yard and income will accrue possibly to a single household. The likelihood of

this positive impact occurring is **high** but since benefit will be to a few landowners, magnitude is **very low**. This is therefore an impact of **minor** significance. Impact significance being minor, impact studies shall not be escalated to the next level. The scoping study recommends the use of existing camps established by the contractors.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement

- a) As a contractual obligation, the contractor shall decommission and restore where temporary facilities had been erected when their use ceases.
- b) All waste thereon should be removed and responsibly disposed of in compliance with national laws (National Environment (Waste Management) Regulations, 2020) and World Bank guidelines as contained in ESS3 (Resource efficiency and Pollution Prevention and Management) and Environmental Health and Safety Guidelines - Industry Specific for waste management.
- c) Any contaminated areas on site must be cleaned up as part of site restoration

8.1.2.5 SKILLS DEVELOPMENT AMONG LOCAL RESIDENTS

The project will have the potential to employ local residents especially on low skill menial jobs within the different sections. Placements will also be available for youths with different levels of formal education and training including artisans and technicians (masons, electricians, mechanics, plumbers, machine operators) among others. Engagement of these categories of people will encourage skills transfer from the experienced road workforce to local residents with multiplier effects for the local construction industry. The likelihood of skills transfer occurring is ranked as **medium** given that the choice of local youth seeking employment cannot be guaranteed. Level of impact magnitude will be **medium** since the numbers involved are small and may occur in the low cadre employment category. Overall impact significance is hence **moderate**.

This being a medium level impact, the assessment will be escalated to impact study to articulate enhancement strategies.

			Likelihood			
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Significance			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Impact Enhancement

- a. Implement the policy on employment of local residents that requires 30% of the work force to be drawn from project districts.
- b. Sensitize people especially youths on non-monetary benefits accruing to employment on road construction project including skills development.
- c. Design employment contracts that guarantee employees progressive placements that facilitate skills development.

8.2 POTENTIAL CONSTRUCTION PHASE NEGATIVE IMPACTS

8.2.1 INJURIOUS DAMAGE TO STRUCTURES NEAR THE CONSTRUCTION ZONES

The Engineering Design Report will detail out the road alignment and attendant Right of Way (ROW). The various town physical plans designate a ROW of 20m. However, there are properties located at the margins of the ROW which may be affected by earth works and pavement construction by the contractor. Both commercial and residential structures may develop cracks or may be rammed into. Most affected roads are in Koboko Town Council on Ali Kenyi Road at small London where about 5 small buildings could be impacted through injurious damage.

The likelihood of this impact occurring is ranked as medium given their location at a junction. Realignment at this point may bring the work zones closer to the structures which are basically brick and mud mortar hence exposing them to vibrations with the potential to precipitate cracks. The magnitude of this impact is ranked as also medium since most of the structures are low cost units, in the event of injurious damage, they can be managed through the construction bills. Overall impact significance is hence **Moderate**.

Likelihood

Significance			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Impact Mitigation

- i. Relocate kiosks to a safer distance away from construction areas
- ii. Respective authorities shall undertake to identify available space for relocation
- iii. Failure to relocate shall lead to compensation
- iv. The Contractor shall be encouraged to deploy lighter equipment in places near structures
- v. All structures deemed vulnerable to injurious damage shall be video recorded
- vi. Where damage is deemed to be caused by poor work methods, the contractor shall be required to compensate under their insurance cover.

8.2.2 IMPACTS ON TREES AND WOODLOTS ALONG THE ROAD.

Improving the carriageway and realignment of selected sections of these urban roads may lead to loss of a few roadside trees along ring road in Yumbe and Church Road in Koboko. The likelihood of trees being cut is low given that most of the trees are outside the 20m ROW designated by the Urban Councils. Impact magnitude is ranked as also **low** and impact significance Minor. Loss of trees has been ranked as minor but will be escalated to full impact study and analysis given the need for greening infrastructure.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

The following measures are recommended for mitigating impacts on roadside trees.

- All trees within an offset of 6m from the carriage shall be marked and the resultant disturbance zone shall be marked off using high reflective tape to avoid equipment going beyond the disturbance zone
- All local councils shall be sensitized on the importance of trees along the carriageway.
- The contractor shall be required to produce a method statement detailing equipment to be deployed and approach to management of trees near work sites
- Where the identified trees are a threat to the pavement through rooting and spreading branches, an assessment by a professional forester shall be engaged during the RAP to value trees and prepare sites for controlled harvesting and further undertaken replacement planting.

8.2.3 LOSS OF ROADSIDE VEGETATION

Some sections of selected roads will traverse patches of fallow lands which could potentially be affected by dumping spoil material and where cross culverts will be constructed. Loss of vegetation is also envisaged during establishment of material source areas especially borrow pits and spoil areas. The preliminary flora survey recorded mainly common weeds and none of them is of conservation concern. The most common species along the selected roads are all species of least concern as per IUCN Redlist 2019.

Likelihood of occurrence of this impact is **very low** because much of the vegetation to be affected is secondary vegetation characteristic of farmlands and the fauna is mainly rodents that inhabit such modified places. None of the fauna recorded appears on the IUCN Red list. Impact magnitude is ranked as **very low**. Overall impact significance is thus negligible. The impact significance is ranked as **negligible** hence the impact shall not be escalated to further study and analysis.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

- Mitigation measures are envisaged at three levels thus avoidance, reduction and restoration.
- The Environment management team shall mark off the disturbance zone using high reflective tape before establishment of diversions to limit the area disturbed by bush clearing equipment.
- A soft start shall be used to allow slow moving wildlife to move away from the alignment.
- All road work sites and auxiliary facilities (material source areas, camps, dumpsites and road work sites) devegetated during construction works shall be restored following standard procedures modified to suit site specific conditions. A site restoration plan and methods statements shall be provided by the contractor

8.2.4 POTENTIAL INTRODUCTION OF INVASIVE PLANT SPECIES

Invasive plant species have the potential to colonize rapidly with detrimental effects on diversity and prevalence of indigenous species. Invasive plant species recorded within the project area include *Lantana camara*, *Lantana trifolia*,

During road construction, mechanical equipment does disperse seeds of these plants as they clear vegetation along the road or at diversions as will be the case for the proposed selected town road upgrade. Seed dispersal will also be associated with equipment working in gravel borrow areas. Haulage of spoil generated from grubbing for long distances to spoil sites will further contribute to dispersal of invasive species. The likelihood of this impact occurring is **very low** since invasive plant species are prevalent and have colonized the entire corridor implying, they have already established and modified ecological zones along the long. Level of impact magnitude is thus **very low** since the common invasive species can be managed and their spread limited. Overall the impact is categorized as **Negligible**. The detailed impact assessment will hence not pick this impact for further assessment.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Avoidance

- a) Transfer of spoil across vegetation zones shall be limited. The Environment team shall identify suitable sites for spoiling in all vegetation zones identified.
- b) Topsoil generated during bush clearance and grubbing will be stockpiled on site to facilitate restoration and landscaping.
- c) Equipment shall be washed before they are moved between borrow areas.

8.2.5 SURFACE WATER POLLUTION

Construction of culverts along the selected roads will have the potential to pollute surface waters courses. Disposal of spoil and Cementous waste near surface water may lead to deposition and subsequent pollution. Large volumes of spoil present disposal challenges, receptors of such cut to spoil generated are mainly valleys, arable land areas, near water courses and communal lands. Whether disposed on public lands or near surface water bodies, runoff will eventually deposit silt into surface water bodies.

Unplanned disposal of cut to spoil leads to secondary socio-environmental impacts including impaired drainage and generalized environmental degradation. Where such practices occur, receptor environments are disrupted and in extreme cases completely impaired. Surface water courses will experience downstream offsite impacts in form of siltation. The likelihood of this unplanned disposal of cut to spoil occurring is ranked as low since much of it shall be used in fill sections subject to meeting material specifications or will be used to backfill borrow areas. Magnitude of impact is ranked as **Medium**. Improper management of spoil and overburden is thus an impact of **Moderate** significance. The impact will be escalated to impact study and analysis for proper mitigation.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Avoidance

- a) The contractor shall not establish equipment parking, washing platforms, material stocking areas and waste stocking sites near any surface water body. A minimum

distance not less than 200m shall be established through an appropriate level of Environment and Social Impact Assessment for the location of any of the above ancillary facilities.

- b) Construction works at all wetlands must be preceded by production of methods statement and approved by the Project Manager.
- c) The Contractor shall procure a detailed Storm water or runoff Management Plan before commencement of civil works.

Impact Reduction

- a) The contractor will construct appropriate structures that slow peak runoff flow and increase infiltration at all construction sites. Depending on site conditions (gradient, settlements, agro land use etc), the contractor shall undertake either terracing, planting vegetation on embankments, excavation of cut off drains and toe drains.
- b) Sedimentation basins shall be constructed where storm water is detected to be carrying high loads of silt.
- c) The contractor shall be encouraged to undertake paving in dry weather to prevent runoff of asphalt or cement materials materials from being transported down slope by runoff.
- d) Reducing the amount of water used to control dust.
- e) Collecting and returning swept material to aggregate base or disposing as solid waste, as described in the
- f) All equipment shall be washed at gazzetted washing bays located in the camp
- g) Only clean quarry rock fill materials devoid of silt and topsoil shall be used in wetlands
- h) Settling basins shall be established during construction at sites near surface water courses in wetlands
- i) No stockpiling of construction materials in a distance of 200-300m of a wetland
- j) All spoil excavated from wetlands shall be stockpiled at a distance of not less than 100 m form the boundary of the wetland
- k) The contractor shall maintain the recommended equipment service schedule by the manufacturer and shall be displayed on the equipment.
- l) Diversion of water courses should be done in such a way so as to avoid sedimentation and should not be longer than 1 month.
- m) Work in wetlands should be scheduled preferably during the dry season.

- n) Disposal of spoil indicating quantity generated, disposal and disposal locations / potential locations should be presented in the Environment Management Plan to exclude wetlands and ease monitoring.
- o) Waste concrete, bitumen, lime and lime bags should be appropriately handled indicating quantity and mode of disposal.
- p) Construct work platforms where water levels are high instead of complete drainage.
- q) Provide temporary diversions such as coffer dams when installing culverts
- r) Use sandbags and rocks to divert stream courses during construction where surface streams exist

8.2.6 IMPACTS RESULTING FROM VIBRATIONS

Ground vibration –

A range of road construction activities generate ground vibration with the potential to affect structures in their vicinity. Heavy earth moving equipment (Excavators, motor graders, vibrating compactors, power generators, rock drills) used in grubbing, excavations, grading and compacting have the potential to generate ground vibrations. Heavy material haulage trucks are yet another source of ground vibrations which extend impacts beyond designated work sites.

Receptors

The most sensitive receptors to ground vibrations are structures near road construction sites especially where structures are near the Right of Way (ROW) baseline assessments have identified structures on Ali Kenyi and Katumba Wamala roads in Koboko as having the potential to be affected by ground vibrations. Poorly constructed and old structures on sections of these roads may be affected by vibrations. Structures may develop cracks, or may collapse due to vibrations.

Magnitude

The magnitude of vibrations emanating from road earthworks and transportation of materials is a function of many localized factors including offset distance from sensitive receptors, work methods, type/make of equipment and general ground conditions at the worksite. Impact magnitude on this project is anticipated to be higher where structures are within 4m of the construction zone. Given that new equipment shall be procured to undertake earthworks and work methods monitored, impact magnitude is expected to be low on this project.

Likelihood of Occurrence

The probability of occurrence of this impact will be gauged by the proximity of structures to the ROW. Throughout the road alignment, structures with limited offset exist and some

very old and fragile while others appear poorly constructed. Impacts associated with vibration have a high probability of occurrence.

Significance:

Blasting and use of heavy construction equipment may result in increased ground vibrations high enough to trigger structural damages for nearby structures. The impact of vibrations is likely to be major for semi-permanent and aged structures that are located less than 4 meters from the construction zone. Given the current operating environment, the likelihood of this impact occurring is ranked as **medium** since the contractor will deploy appropriate light to medium equipment on section identified as highly sensitive during the study. Impact magnitude is ranked also ranked as **Medium**. Overall impact significance is therefore ranked as **Moderate**. Given the level of significance, this impact shall be escalated to impact assessment to streamline mitigation measures.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigations

Avoidance

- i) The contractor shall produce a baseline of structures along the project alignment before commencement of construction

Impact Reduction

- i) The Contractor will ensure that the community structures are inspected after every blasting operation within a radius of 1 Km.
- ii) Monitoring of all work sites on regular basis to identify affected structures
- iii) A grievance redress mechanism shall be constituted.

8.2.7 IMPACTS ON AIR QUALITY

The key sources of air emissions include earth moving equipment, generators, material delivery trucks on unpaved surfaces (dust), material stockpiles, loading operations, bitumen heating and equipment repair workshops. The emissions include particulate matter as well as gases. Construction activities will typically involve dumper trucks transporting construction materials and spoil generated by earthworks. During the construction phase, Suspended Particulate Matter (dust) is expected to be the main pollutant associated with the earthwork activities and material handling especially during the dry season. Exposed road surfaces during the dry season can generate a lot of dust that will add to the air pollution loading. Other sources of air pollution will be the asphalt plant emissions (CO, NO_x, SO_x and PM) from construction equipment.

The main source of air pollution during the operational phase will be vehicles moving on the highway. Most transportation vehicles run on hydrocarbons and emit essentially the same pollutants. The pollutants of greatest relevance to transportation air quality impact assessments are the ones that are subject to air quality standards or guidelines. These include carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM_{2.5} and PM₁₀), benzene, 1,3-butadiene, formaldehyde, acetaldehyde, and acrolein. These compounds can damage health and/or the environment.

Sensitive receptors – The sensitive receptors identified along the selected urban roads include education institutions and health care facilities. Other impact receptors of concern include, religious institutions such as several mosques and churches, businesses enterprises along the road especially those selling, food stuffs, clothes and other items that can be affected by dust and in turn lose sale value.

Magnitude

Dust emissions often vary substantially from day to day, depending on the level of activity, the specific operations, and the prevailing meteorological conditions. The impact of dust nuisance will be confined within a distance of 50-200m from the ROW during the dry season though could be much lower during the wet season. Dust will inevitably occur at and inside the construction corridor and will also be generated alongside the haul routes from material source areas. Exhaust fumes from heavy construction equipment will temporarily affect ambient air quality. The concentration of air pollutants will be highest at the immediate construction site and generally decrease with increasing distance from the source.

Dust is the major air quality risk from road construction sites. Dust is a problem for a variety of reasons. During pavement construction dust containing fine Cementous materials will be released. If not suppressed, dust can taint goods in shops such as textiles, sugar, salt and grain flour and this is likely to be a major grievance amongst the business community. Health effects of dust will further compromise the health of the old, sickly and young infants. Unmitigated, dust pollution is a high magnitude impact with potential to erode project benefits to sensitive receptors and precipitate grievances.

Significance – It is assumed that dust nuisance will mainly become topical in very dry periods and wherever bush clearance, earthworks, material transport or pavement construction takes place in the vicinity of settlements. The pollution in localized places and working zones may affect the health of workers and any nearby people or sensitive receptors within 50-200 meters. Overall, the impact of air pollution during construction will be moderate for receptors within 200-300 m and low for receptors located more than 500 m from the road.

During operation, it is predicted that the road will be used by a combination of heavy-duty trucks and light passenger vehicles with the latter predicted to dominate. The effect of air pollution on receptors depends on the distance between them and the road, wind direction, topography and other factors such as receptor sensitivity. The main direct effects are in the areas closest to the road as the rapid dispersion and dilution of exhaust gases quickly reduces their concentrations to levels at which risks are minimal. It is expected that near-road air pollutant concentrations will be highest. Specifically, it is predicted that the concentrations of key pollutants (NO_x, CO and PM) will be substantially above their respective regional levels within approximately 100 m of the road in case the vehicular traffic significantly increases. The resulting pollution concentrations will, however, be superimposed on the existing background levels which is an important contribution as background levels of pollution are assumed to be low because of absence of any major industrial emission sources. Likelihood of impact occurring is **high** and Magnitude of impact is also **medium** hence an impact of **major** significance. The impact will hence be escalated to the impact study and mitigation design

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigations for dust nuisance

- Suppress dust release at all work sites by bowing water on all accesses to material/quarry sites used by haulage trucks
- All material haulage trucks transporting construction materials shall be covered
- Carry out wet crushing and bowse water at quarry site.
- Place dust screens on conveyor belts of the crusher to trap dust

- Minimizing the speed at which vehicles move on unsealed surfaces (30-40 km/hr)
- Regularly service vehicles and machinery likely to produce emissions if ill-serviced
- Avoid long idling of vehicles and machinery to reduce the emission of exhaust fumes
- The speed of haulage trucks and other vehicles along the project road and any road diversions shall be limited to reduce dust levels by installing speed control structures such as humps at populated areas.
- Ensure that erodible material stockpiles are distant from sensitive establishments such as schools, hospitals, markets, trading centres and accommodation facilities among others to reduce dust emissions
- Aggregates and sand at the site are kept dump at all times or covered with tarpaulin to minimize dust emissions

8.2.8 INCREASED NOISE LEVELS

Impact Description

Road construction works is normally characterized by multiple equipment operating at a single site. Equipment clusters will generate cluster noise that may exceed legally acceptable levels and will require mitigation. The main sources of noise and vibration during construction include the following:

- Earth moving equipment (Excavators, loaders, motor graders, bulldozers etc)
- Haulage trucks and general vehicular movement
- Generators and compressors
- Human conversation

Tire-pavement noise will be generated during operation. Tire/pavement impact generates noise at speeds typically greater than 35 mph (expected to be exceeded along the road) and the noise levels are dependent on vehicle age, type, vehicle speed and tire type.

Receptors

Sensitive noise receptors include schools, health facilities, commercial units and residential properties located within less than 100 m from the proposed construction areas. Workers exposed to construction noise are sensitive receptors as well.

Magnitude

Construction noise to be generated on this project could be of short duration, intermittent/repetitive or continuous and long term. Noise generated from earth works may be short term in duration at a particular receptor while culvert construction will generate intermittent or continuous noise. The variation in generation and exposure duration makes noise a very complex impact to mitigate

The magnitude of noise as an impact will be thus a function of the duration, nature of

sensitive receptor impacted, time of exposure and offset distance from the source. To the work force, noise is certainly a high magnitude impact especially when above the legally acceptable dBA of 85dBA for factory conditions. Sound levels associated with heavy construction equipment range from 80 to 120 dB(A) and power tools commonly used in construction produce sound levels of up to 115 dB(A). Noise levels for typical road construction machinery (measured 15 m away) are presented below:

- Power saw- 110 dBA
- Dump truck- 88 dBA
- Portable air compressor- 81 dBA
- Concrete mixer- 85 dBA
- Bulldozer- 87 dBA
- Rock drill- 98 dBA
- Pneumatic tools- 85 dBA

Impact significance – The potential noise related concerns during construction is disturbance to sensitive receptors like schools, health centers and residential areas in the Project area. The level of noise exposure and associated risks for the health and wellbeing of the workforce will depend on the individual workplace and type of equipment used. The likelihood of this impact occurring is taken as **high**. Impact magnitude has tentatively been ranked as **medium**. Overall impact significance is thus **Major**. The impact shall be escalated to the next stage of impact study and analysis to enable impact mitigation.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigations

Avoidance

In many of the areas with construction noise impacts, effective noise barriers may not be feasible or the cost-benefit value for an effective barrier may be prohibitive. Therefore, not all impacted areas are recommended for noise mitigation. However, some receptors such as schools and health facilities can be prioritized. To address the temporary elevated noise levels that may be experienced during construction, standard mitigation measures shall be incorporated into construction contracts, where it is feasible to do so;

- i) Time and Activity Constraints, i.e., operations will be scheduled to coincide with periods when people would least likely be affected; work hours and workdays will be limited to less noise-sensitive times. Hours-of-work will be approved by the Engineer having due regard for possible noise disturbance to the local residents or other activities. Construction activities will be strictly prohibited between 10 PM and 6 AM in the residential areas. When operating close to sensitive areas (within 250 meters) such as residences, schools or medical facilities, the Contractor's hours of working shall be limited to 7AM to 6PM; Any works to be undertaken at night must be approved by NEMA and MGLSD, and closely monitored and supervised by the Resident Engineer.
- ii) For schools with no offset from the carriageway, consideration will be given to construction of screens, or other forms of barriers to avoid disruption of students' attention while studying and their safety.
- iii) Give notice as early as possible to management of sensitive receptors for periods of noisier works such as excavation. Describe the activities and how long they are expected to take. Keep affected neighbors informed of progress.
- iv) Within normal working hours, where it is reasonable to do so, schedule noisy activities for less sensitive times; provide periods of respite from noisier works (for example, periodic breaks from jackhammer noise).
- v) All mechanical plants are to be silenced by the best practical means using current technology. Mechanical plant, including noise-suppression devices, should be maintained to the manufacturer's specifications. Internal combustion engines are to be fitted with a suitable muffler in good repair.
- vi) Maintenance tools, machines and equipment so that they are in good conditions. When some wrong is found, they must be fixed immediately in order to reduce noise from the equipment.
- vii) Fit all pneumatic tools with an effective silencer on their air exhaust port.
- viii) Install less noisy movement/reversing warning systems for equipment and vehicles that will operate for extended periods, during sensitive times or in close proximity to sensitive sites. Occupational health and safety requirements for use of warning systems must be followed.
- ix) Turn off plant when not being used.
- x) All vehicular movements to and from the site to only occur during the scheduled normal working hours unless approval has been granted by the Engineer.

- xi) Keep good conditions of trucks that use to transport construction materials so they cause no loud noise and control the truck speed, to be not exceeded 40 km/hr when driving through communities, and not exceeded 80 km/hr when driving on highways.
- xii) Where possible, no truck associated with the work should be left standing with its engine operating in a street adjacent to a residential area.
- xiii) Provision of noise protection kits such as ear plug, earmuff, for workers who are working in the area with noise level is higher than 85 dB(A). It is designated as a regulation that workers must wear protection kits in case of working in a noisy area

8.2.9 TRAFFIC ACCIDENTS

Haulage of road construction materials from source areas to worksites will be undertaken. Transportation of gravel, crushed stone (aggregate) and other concrete products from the quarry and crusher to construction work sites will be associated with traffic accidents involving people and livestock. Unnecessary speeding by material haulage trucks poses a high accident risk to other road users and the community. At high risk are sites near school, close to busy market areas and junctions.

Material haulage will be short-term ceasing with completion of construction activities but effects (if they occurred) such as accidents (hence disability or death) have negative, long-term and irreversible socio-economic impacts. The likelihood of this impact occurring has been ranked as **medium**. Given the nature of the receptor environment, **magnitude** of this impact is categorized as **High**. Overall impact significance has been ranked as **Major**. The impact shall be escalated to impact analysis and mitigation.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation.

Avoidance

- i) The contractor shall draft a Traffic Management Plan to guide traffic during construction.
- ii) Contractor shall install temporary construction road signage during construction and ensure drivers observe speed limits for the safety of other road users.
- iii) Contractor should deploy traffic guides in accordance with the Traffic Management Plan.
All approaches and exit of work sites must be manned by guides.
- iv) Contractor shall provide temporary and permanent speed reducing devices e.g. humps especially near population centers, markets, school premises, health facilities and areas of worship and at work sites
- v) Contractor shall prohibit haulage activities at night to avoid accidents in high population settled areas and trading centers.
- vi) Construction crews should take care to watch out for and avoid livestock.
- vii) The contractor shall suppress road dust by watering wherever necessary. A water bowing schedule must be provided to the RE.
- viii) All detours shall be properly marked, and signage installed to guide motorists and other road users.
- ix) All drivers and machine operators shall be licensed and undergo periodic random tests to determine levels of alcohol consumption.
- x) A driver code of conduct shall be drafted, and all drivers required to abide by it.

Residual Impact: Following mitigation, residual impact will be of minor significance.

Impact management:

- i) The contractor should sensitize project drivers on accident risk and control measures.
- ii) A driver instruction program should be designed to re-equip drivers with defensive driving skills on a quarterly or biennial basis at the minimum.
- iii) The contractor should compensate victims of accidents through an insurance policy.
- iv) Awareness forums shall be held with communities along the road to sensitize them on road safety, through a nominated service provider.
- v) The contractor shall report all accidents to the Resident Engineer and World Bank within 24 hours of occurrence.

8.2.10 WASTE GENERATION

Road construction sites generate large quantities of assorted waste including bulky construction waste (concrete waste, concrete products, demolition rubble, wooden boards, wrapping materials (leather, plastics, and textiles), metallic strips/pieces, obsolete equipment, and equipment parts, among others.

General litter: Solid wastes, if not well-managed, can lead to health and safety issues, including accidents, offensive odour, harbouring insect vectors and scavenging animals. The wastes to be generated at the construction phase include plastics, papers, leather, textiles and soft wood.

Construction Debris

Construction rubble including spoil, vegetative materials generated during grubbing, concrete waste among others shall be generated at construction sites, spoil that meets construction material specifications shall be used as fill but should it fail, it must then be disposed of.

Much of this waste can be recycled or reused though avenues to implement these management options are rarely explored the likelihood of this impact occurring is hence ranked as **medium** since bulk construction waste can be reused in quarry back fill and other operations and in essence when waste concrete and concrete products represent a cost to the contractor which they are keen to avoid. Level of impact is **medium** since the quantities are concentrated at known locations (camp and equipment yard) and management options available at low cost. Overall impact significance is **medium**. The impact will be taken further to the impact study stage for proper mitigation planning.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

The basis for waste management will be drafting a waste management plan detailing how each category of wastes shall be managed the plan shall be appended to the CESMP. The following mitigation measures shall be applied

Avoidance

- I) Develop a procurement policy that demands taking back all unwanted wrappings by the supplier.
- II) Draw up materials and other consumables procurement plans that avoid over stocking and generation of wastes
- III) Construct segregation at source waste banks using colour coded bins to handle metallic, paper, plastics, glass, leather/textiles and biodegradable food waste
- IV) Engage Local Governments in the respective areas of jurisdiction to arrange contract terms for collection and transportation of wastes to approved landfill sites
- V) Undertake sensitization of all workers on waste management

VI) All hazardous wastes shall be segregated at source, batched and stored in leak proof containers set on screed or concrete platform sheltered from weather conditions.

VII) Excavated materials or other construction materials shall not be stockpiled or deposited near or on-stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the watercourse itself.

Impact Reduction

(i) The contractor shall explore avenues for reuse or recycling of wastes. Where the community expresses interest, the contractor shall use appropriate and safe approaches to waste disposal that benefit local communities.

(ii) The contractor shall procure the services of a NEMA licensed waste management firm to evacuate, transport and dispose off hazardous wastes

(iii) All waste management facilities will have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. The facilities shall be roofed to avoid exposure to rain and storm water that have the potential to transport leachate spills.

(iv) Concrete waste and damaged or rejected concrete products shall be reused where possible as fill material where specifications allow, however, where such products cannot be reused, they will be used as backfill material for borrow pit and quarry restoration.

(v) All excavated spoil and scarified asphalt pavement waste shall be blended to provide fill materials where specifications allow. However, scarified pavement waste and spoil shall be used to backfill the quarry source areas during restoration.

(vi) Concrete wastewater shall be managed through construction of sedimentation tanks or pits to collect and retain all the concrete washout water. After the tank has been used to wash down the chutes of ready mixed trucks and the wash water has evaporated or has been vacuumed off, the remaining hardened solids can be broken up and removed from the pit and disposed as fill material. Concrete wash water is highly alkaline (pH of 10-13). Therefore, pH correction will be required.

8.2.11 TRAFFIC HOLDUPS AND DIVERSION AT WORK SITES

Inevitably, road construction will necessitate holdups and/or diversion of traffic from roads being worked on to allow fast and safe road works and continued use of the road. Diversions and holdups will cause temporary delays and constrained access to commercial enterprises, residential properties and general inconvenience to the travelling public. The likelihood of impact occurrence is ranked as **medium** since these are very short road

sections with many alternatives and level of impact magnitude is **medium**. Overall impact significance is therefore **moderate**, since this impact can readily be managed.

Impact receptors

- Communities traversed by diversions/detours,
- Road users,
- Vehicle owners,

The impact will be escalated to the next level of impact study, analysis and mitigation.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Avoidance

- I) The contractor will announce in all appropriate media impending major diversions before work begins.

Impact Reduction

- II) Contractor should place signs warning road users about traffic detours at distance of not less than 5km before major diversions.
- III) Contractor should have guides at detours to control traffic.
- IV) Traffic holdup points should not be far apart and must be well designed to avoid vehicles piling up at points
- V) Timing must be appropriate to avoid irrational decisions by guides managing the control points, and traffic hold-ups shall not exceed 10 minutes at any given hold-up section.
- VI) Install communication facilities to allow guides follow timing schedules
- VII) Training of personnel to manage control stations.

Residual Impact: Following mitigation, residual impact will be of negligible significance.

Impact management

The Contractor will provide communities with information and plans of intended diversions before they are established.

8.2.12 OCCUPATIONAL HEALTH AND SAFETY RISKS

Road works will have the following occupational health and safety risks with potential to cause serious injuries to workers:

Accidents

Road construction activities and equipment have potential to cause accidents. Mobile equipment, electronic gadgets, power generators, rock drills and crushers among others can malfunction or be improperly operated leading to accidents. Below is a profile of potential accident causes:

- Drowning on the rivers
- Motor accidents especially motor bikes resulting normal road traffic
- Burns (handling hot bitumen, welding/ metal works, etc)
- Falls from working at heights or wet surfaces on bridges, the quarry among others
- Injuries resulting from falling blunt and sharp objects
- Electrocution
- Automobile equipment accidents including delivery trucks
- Cuts by sharp objects
- Trapping in mobile machine parts
- Fire accidents

Ailments associated with workplace conditions

Exposure to noise, vibrations, gaseous pollutants, dust, poor working positions, long working hours and inappropriate equipment, poor housekeeping have potential to cause ailments that impair human functionality. The following ailments are common in road construction:

- Drowning in river water
- Ergonomic complaints resulting from inappropriate working positions
- Respiratory ailments resulting from exposure to dust
- Chronic fatigue
- Skin diseases associated with exposure to chemicals and related reactive substances.
- Loss of hearing

The most common source of noise pollution on sites is emitted by the following road construction machinery and their noise levels (in dBA, measured 15 m away)

Power saw- 110

Dump truck- 88

Portable air compressor- 81,

Concrete mixer- 85

Bulldozer- 87,

Rock drill- 98

Construction noise at sites reduces concentration of workers and masks communication leading to accidents. Poor housekeeping at workshops and sites is a major source of injury, while failure to provide drinking water and mobile toilet facilities at work sites could also pose considerable health risk to workers (and local communities traversed). Occupational Health and Safety impacts will potentially occur at any point during road construction and while some accidents could be minor, others might be grave leading to disability or loss of life of construction workers.

The duration of this impact will be short term occurring only during the construction phase though the effects have long term implications. Likelihood of this impact occurring is **high** because of the number of workers expected on sites and the common reluctance of companies to enforce health and safety regulations. The possibility of fatalities on sites raises the magnitude of the impact hence level of impact is ranked as **High** on account of the nature of construction activities and equipment. Overall impact significance ranked as **major**. The impact will be escalated to the full impact assessment and mitigation level.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Avoidance

- I) The contractor shall abide by the “General Specifications for Road and Bridge Works 2005” (Series 1000- General, Section 1800, pg 1000-43) which requires contractors to comply with national byelaws related to HIV/AIDS, OHS, gender equity among others (OHS- Public Health Act, Workers Compensation Act, Employment Decree, HIV/AIDS: National Multi-sectoral HIV/AIDS Policy Gender equity: National Gender Policy).
- II) The contractor will develop a comprehensive OHS policy and plan which should among others address the following: risk assessment, training in OHS, safety awareness, housekeeping, reporting, safety audits, safety personnel and responsibilities.
- III) Design an induction training programme for all new workers on safety and risk in road construction.

- IV) Provide for OHS in all method statements
- V) Design safety safe work procedures for all sections on the project
- VI) Ensure that all equipment is safe and certified by the relevant authorities
- VII) Undertake safe handling and documentation of all hazardous substances including wastes on the project

Impact Reduction

- I) Provide all workers with requisite protective gear (see Table below).

Table 8. 1 Personal Protective Equipment According to Hazard

Objective	Workplace hazards	Suggested PPE
Eye and face protection	Flying particles Direct sunlight and glare	Safety glasses
Head protection	Falling objects, inadequate height clearance, and overhead power cords	Plastic hard hats with top and side impact protection
Hearing protection	Noise	Ear plugs or muffs
Foot protection	Falling or rolling objects, pointed objects	Safety shoes and boots
Hand protection	Hazardous materials, cuts or lacerations	Gloves made of rubber or synthetic materials
Respiratory protection	Dust, lime operations, stone quarries	Facemasks filters for dust removal
Body/leg protection	Hazardous materials, biological agents, cuttings, and lacerations.	Overalls /coveralls

- II) Provision of signage reminding use of PPE at appropriate locations in the project area including ancillary work sites
- III) Provision of warning signage on all high-risk equipment and on work surfaces.
- IV) Install “no smoking” signage in high fire risk (fuel tanks and dispensers), public and communal areas.
- V) Ensure adequate fire safety, fire exists and fire assembly points at camp.
- VI) Provision of onsite gender friendly toilet and washing water for workers.
- VII) Hiring a full time qualified “Accident prevention officer” or safety officer
- VIII) Conducting safety awareness among all workers and routine/daily toolbox meetings at all work fronts, led by section heads/ safety champions and supervised by the Environment, Health and Safety Officers on both the Contractor’s and Supervision Consultant’s teams.

- IX) control harmful insects/ vectors (including mosquitoes and houseflies) in this case tsetse flies shall be the major focus.
- X) Reporting accidents to supervising engineer in a timely manner and police including maintaining an accident and incident log; Severe Accidents (fatalities) and Serious Accidents shall be reported to the RE immediately and to MOWT within 12 hours and to World Bank within 24 hours of occurrence.
- XI) Undertake to promote sanitary measures (provide clean drinking water, drain stagnant pools near the camp etc to control contagious diseases (e.g. Cholera)
- XII) Observe working hours, provide appropriate fixtures and tools to reduce ergonomic injuries (poor working postures, heavy loads, etc)

Residual Impact: Following mitigation, residual impact will be of low significance.

Impact management

Supervision and monitoring of implementation of the OHS plan shall be key in managing OHS impacts. The Supervision Consultant shall be required to maintain a Compliance Tracker to track implementation of corrective instructions during project implementation and this will provide information on areas that need follow-up and also guide on the use of financial remedies to evoke Compliance. For example, each instruction that does not get implemented for two consecutive reminders would attract financial penalty without further reminder or withhold of any financial certificate due for payment

8.2.13 PUBLIC HEALTH AND SAFETY RISKS

Public health and safety risks are anticipated during the construction phase involving the general public and the communities traversed by the selected roads. The duration of this impact will be long term occurring even after the construction phase during road operation. Effects have long term implications. Likelihood of this impact occurring is **high** because of the high number of road users on these relatively busy selected roads. This poses health and safety risks like accidents, exposure to hazards like water pollution, noise and air pollution. The possibility of fatalities on sites raises the magnitude of the impact hence level of impact magnitude is ranked as **High** on account of the nature of construction activities. Overall impact significance ranked as **major**. The impact will hence be further analyzed at the next stage.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate

	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation Avoidance

- I) The contractor shall design a comprehensive Traffic Management Plan
- II) All drivers of material delivery trucks and general pool drivers shall demonstrate competence and appropriate licensing requirements to operate designated automobiles and equipment before employment
- III) All drivers and equipment operators shall be sensitized on work place traffic accidents
- IV) Hording off material source areas to keep off the public.
- V) Rock quarries shall not be located within 500m of public places.

Impact Reduction

- I) Contractor shall install temporary construction road signage during construction and ensure drivers observe speed limits for the safety of other road users.
- II) Contractor should deploy traffic guides, where necessary, such as at approach to trading centers and construction sites.
- III) Contractor shall provide temporary and permanent speed reducing devices e.g. humps especially near population centers, markets, school premises, health facilities and areas of worship and at work sites
- IV) Contractor shall prohibit haulage activities at night to avoid accidents in high population settled areas and trading centers.
- V) Construction crews should take care to watch out for and avoid livestock.
- VI) The contractor shall suppress road dust by watering. A water bowsing schedule must be provided to the RE for approval.
- VII) To avoid excessive haulage traffic noise at sensitive facilities, the contractor should install temporary speed reduction features (humps) adjacent to schools or healthcare centers. This would avoid noise associated with high-speed deceleration and acceleration at humps. Speed reduction humps should be located a reasonable distance prior to such places in such a way that trucks will not have gained sufficient acceleration.

- VIII) All detours shall be properly marked, and signage installed to guide motorists and other road users.
- IX) All drivers and machine operators shall be licensed and undergo random monthly tests to determine levels of alcohol consumption.
- X) A driver Code of Conduct shall be drafted, and all drivers required to abide by it.
- XI) Schools shall be screened from road works and speed control structures shall be installed at such areas and towns.
- XII) The contractor shall install culverts and safe temporary crossing points to enable people to access their properties and social services at all times
- XIII) Installed culverts shall be properly backfilled, levelled and compacted to enable all community resident easy access including the disabled.
- XIV) The Contractor undertake community sensitizations and engagement on their health and safety during road construction works, working closely with the traffic police and community leaders and District Officials as and when necessary.

Residual Impact: Following mitigation, residual impact will be of minor significance.

Impact management:

- I) The contractor should sensitize project drivers on accident risk and control measures.
- II) A driver instruction program should be designed to re-equip drivers with defensive driving skills on a quarterly or biennial basis at the minimum.
- III) The contractor should compensate victims of accidents through an insurance policy. Awareness forums shall be held with communities along the road to sensitize them on road safety, through a nominated service provider.
- IV) The contractor shall report all accidents to the Project Manager within 24 hours.

8.2.14 CONSTRAINED ACCESS TO PROPERTIES

The selected town roads in Koboko, Yumbe and Moyo all serve commercial and residential properties in addition to providing access to social services. Constrained access to

properties and social services is envisaged during construction. The most critical constraint will be access to commercial enterprises as this has the potential to impact livelihoods. The risk of accidents will also be higher near cluster settlements and public facilities, especially schools and health facilities. The most affected section of the community will include women, the elderly, sickly and the children. Likelihood of this impact occurring is ranked as **High**. The level of impact magnitude has also been ranked as **high** due to the potential to lead to casualties. Overall impact significance is thus **Major**. Impact studies will further be undertaken to present appropriate mitigation measures.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

The following mitigation measures shall be implemented:

- i) The contractor shall limit the stretch excavated to not more than 100m on a single day
- ii) All trenches and excavations shall be screened off using appropriate barricades (jussy barriers, safety nets, reflective tapes)
- iii) The contractor shall provide appropriate safe temporary crossing structures that will serve all categories of users including the disabled, sickly, aged, women and young children.
- iv) All existing access shall be maintained. The contractor shall undertake to map the sites before earth works begin

8.2.15 DISRUPTION OF SCHOOL ACTIVITIES

There are educational facilities along the project some of the selected town road ranging from infant centers, basic primary schools, secondary schools to tertiary institutions. Heavy earth moving equipment might attract inquisitive children to construction sites. Besides being a safety risk, noise and dust from road construction activities and equipment might temporarily disrupt school activities. If due caution is not taken by drivers, haulage trucks and road construction equipment might be an accident risk to school children and

further cause distraction. Likelihood of this impact occurring is ranked as **medium** and magnitude been ranked as **medium** since construction activities are transitory moving along the alignments and not contained at a particular location for long. Overall impact significance is **moderate**. Impact analysis will be escalated to the next level.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Avoidance

- I) The contractor together with the utility service providers shall mark out utility lines where they exist within the operation zone before operations commence.
- II) All affected services shall be assessed and appropriate action to ensure uninterrupted service undertaken before site work begins
- III) The Contractor will engage the utility service providers before commencement of the works

Residual Impact: Following mitigation, residual impact will be of minor significance.

Impact Management

Acquire utility site plans to guide planning at work site.

8.2.16 IMPACT ON UTILITIES ALONG THE ROAD

Most of the selected roads have laid infrastructure lines within the Right of Way (ROW) of the existing alignment which will certainly be followed by the proposed road upgrades. The existence of linear infrastructure service lines (electricity new lines, water pipes, telecommunication cables and CCTV infrastructure will certainly require relocation depending on the confirmed design. Disruption of utility services may occur and will be short-term occurring only in the event of an accidental damage. Likelihood of impact occurrence will be **high**, relocation of the lines has to take place together with water lines.

The level of impact magnitude is **high** since the cost of relocating lines and disruption of services is considerable. Overall impact significance is therefore ranked **major**. The impact will hence be further analyzed during impact study.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Avoidance

- I) The contractor together with the utility service providers shall mark out utility lines where they exist within the operation zone before operations commence.
- II) All affected services shall be assessed and appropriate action to ensure uninterrupted service undertaken before site work begins
- III) The Contractor will engage the utility service providers before commencement of the works

Residual Impact: Following mitigation, residual impact will be of minor significance.

Impact Management

Acquire utility site plans to guide planning at work site.

8.2.17 IMPACT ON CULTURAL HERITAGE

Cultural Heritage Resource exist along some of the selected roads especially areas of worship. Encountered areas of worship that will be presented in the full ESIA are however out of the ROW and are mainly mosques and churches. Loss of these sites is not envisaged but rather constrained access during the construction period.

The most predicted impacts will be as follows

- Access to living resources during construction. Contractor may leave ditches without facilities to access these sites

- Impact of vibrations, noise and dust from construction equipment on living resources

Given that some of the cultural heritage resources are near the Right of Way, the likelihood of occurrence is ranked as **medium** and level of impact magnitude ranked also as **low** rendering significance to be **moderate**. The impact will be escalated to the next level of assessment.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation Avoidance

- i) Identified PCRs shall be documented and mapped out by the contractor.
- ii) Design alignments shall avoid such sites where possible
- iii) All works near identified sites shall be carried in strict adherence to the PCR management plan appended to this document.
- iv) A watching brief must be developed for earthworks and for all material source areas.
- v) Archaeological monitoring for all ground disturbing activities shall be undertaken by the environment and social safeguards team
- vi) Advice/ guidance to the contractor with respect to halting or moving construction activities if earthworks encounter archaeological features especially at borrow areas.
- vii) Conducting preliminary assessment of all previously unidentified archaeological features encountered and submission of these to the national museum.
- viii) Processing/ excavation of any unidentified subsurface archaeological features encountered in accordance with standard procedures recommended by the Department of Museums and Monuments.
- ix) Maintain watching briefs during opening up any new borrow sites or deep excavations at any location during road construction, with clear procedures for protection and documentation of any “chance finds” encountered.
- x) Maintain monitoring records of all unidentified archaeological features encountered.
- xi) The Safeguards team with assistance of a competent archeologists will train the contractor key site staff on managing construction at identified PCR sites.

- xii) All Construction crew shall be inducted on the importance of PCRs
- xiii) Develop set of points to be discussed in “Toolbox” sessions to create awareness among road construction crews on “chance finds”/ archaeological features. (Note that as part of their sensitization, workers will be required to cease work if they encounter archaeological features and report to Contractor’s Environmental Officer who will notify the Project Manager).
- xiv) Draft a post-construction report for MOWT upon completion of road construction.

Impact Reduction

- (i) All burial grounds near the ROW shall be mapped out by the Safeguards team prior to commencement of construction.
- (ii) All burial site shall be screened off using high reflective tapes to avoid accidental destruction by construction equipment. The cordon will also be used to avoid defacing, dumping spoil among others on burial grounds.
- (iii) Setting aside a site for relocation of chance finds
- (iv) Should any human remains be disturbed, exposed, or uncovered during excavations and earthworks, these should immediately be reported to local authorities. Burial remains should not be disturbed or removed until inspected by an authorized authority
- (v) Once identified, all proposed borrow pits should be investigated for archaeological remains.
- (vi) Prohibit collection of archaeological artifacts by road construction crews.
- (vii) Avoid undue disturbance to areas outside approved construction areas.

Residual Impact: Following mitigation this impact will be greatly eliminated

Impact management

The contractor must be aware of the potential presence, historical value and importance of physical-cultural resources along the road and appropriately sensitize workers to conserve them during road construction.

8.2.18 GENDER IMPACTS

Baseline assessments indicate existence of gender-based violence in a few communities along the selected roads. Neglect of children especially the girl child as evidence in school attendance exists together with early marriages among women. These gender impacts point to a precarious gender situation. Negative gender impacts will not only arise from

discrimination in hiring road construction workers if preference is given to men who are perceived to be stronger and more resilient but further due to neglect arising from taking paid employment by men. New lifestyles may ensue as men earn paid income leading to domestic strife and subsequent neglect of household welfare. Preliminary Focused Group Discussions reveal gender entrenched views on polygamy and resource access/ownership.

New opportunities are most likely to generate a wave of excitement leading to multiple gender induced discrimination and increase incidences of Gender-Based Violence (GBV) putting women in more vulnerable situations. Men could abandon homes on gaining paid employment to settle with new partners.

Even those women who may gain employment on the project, gender stereotyping may affect their self-esteem and performance and may prefer to stay out of employment not because they lack skills but due to gender harassment. The likelihood of this impact occurring is ranked as **high** on account of the many polygamous unions, the urban nature of the population and current high asset poverty levels. The level of impact magnitude will be **medium** since cultural mechanisms for family dispute resolution exist. However, impact significance remains **Major**. The impact will be escalated to analysis and mitigation.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Avoidance

- I) The contractor shall design a comprehensive Gender Policy and Gender Mainstreaming Plan
- II) All project employees shall be required to sign Company Gender Code of Conduct which among others addresses gender harassment.
- III) Sensitization programs for communities on gender-based violence shall be conducted by the contractor

Impact Reduction

- i) The Contractor shall collaborate with the nominated service provider and MOWT to manage risks of GBV and VAC
- ii) Ensure affirmative action in job allocation to road construction workers whereby women are given tasks they would do best, based on their capabilities.
- iii) Workplace environment including tools and fixtures should be gender friendly.
- iv) Construction labour shall be inducted on gender harassments
- v) All construction labour not originating from the project area shall be registered with local authorities to avoid anonymity.
- vi) All gender-based grievances shall be reported to the Grievance Redress Mechanism

8.2.19 SEXUAL AND GENDER BASED VIOLENCE

Preliminary interviews with local leaders in the project area indicate a prevalence of Gender Based Violence (GBV) and violence against children (VAC), Violence Against Women and Girls (VAWG) and Intimate Partner Violence (IPV). Local leaders reported GBV incidents related to denial of resources, opportunities & services at household level, mostly perpetrated by fathers, as well as Intimate partners (IPV). The project is required to have an employment quota of 30% for women. However, given prevailing Gender imbalances, women may be held back from paid employment.

In addition, displacement of female pet traders along the selected roads will mostly affect women. This has the potential to expose women to GBV risks. Therefore, it's certainly possible that the project's influence on increasing exposure to GBV will be felt. The likelihood of this impact occurring has been ranked **high** on account of women who own kiosks along the selected roads. Impact magnitude is **low** since the numbers affected are small and opportunities to relocate within the same locality exist for example offsetting the vending tables a few meters out of the construction zone.

Therefore, significance of the impact is **Moderate**. The impact shall be escalated to the next level.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate

	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation Avoidance

- i) Contractors to develop and implement GBV Codes of Conduct for workers, visitors, sub-contractors and service providers
- ii) ii) Promote GBV/SEA/SH awareness before and during project implementation
- iii) Strengthen GBV Referral pathways within the community (core and influence zone of project area).
- iv) There is need to engage into community policing with emphasizing on prevention of GBV. This can be done by the local area police department of Family Protection Unit (FPU).
- v) The local government (CDO) should strengthen awareness and sensitization against GBV.
- vi) MOWT shall contract a dedicated service provider for GBV, VAC, HIV/AIDS to provide overall mitigation implementation and management during civil works.
- vii) The contractor, where a case arises, will cooperate with law enforcement agencies in investigating complaints of SGBV.

8.2.20 IMPACTS ON VULNERABLE INDIVIDUALS, HOUSEHOLDS AND GROUPS

Preliminary interviews with local community leaders and onsite visits reveal the existence of vulnerable individuals, families, households, and roadside traders. This is a generic category of people whose ability to harness their entitlements has been encumbered. Road construction will entrench their vulnerability since they will be further excluded from decisions that affect their livelihoods and welfare. Included in this category are the elderly, children, women and especially those in polygamous marriages, women roadside pet traders and the terminally sick. Road construction could result into constrained access to homes, gardens, water sources, places of worship and schools, especially for women, children, elderly and disabled people. Temporary access “bridges” improvised to abate this impact are often inadequate and unsafe for use by vulnerable people. Children under 18 years could be attracted to work on roads abandoning school. The girl child will be more vulnerable to male construction workers while young males could develop drug abuse tendencies resulting from fraternization with adult construction labour. Relocation of female roadside traders if not well executed will lead to loss of livelihoods. This impact is quite sensitive since it involves vulnerable people. The likelihood of this impact occurring

is ranked as **medium** though level of impact magnitude is **high**. Overall impact significance is thus **major**. Further impact study shall be undertaken to come up with appropriate mitigation measures.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

Impact Reduction

- I) Identify vulnerable individuals within the Project affected People (PAPs) and liaise with local authorities to determine on how best they can access their compensation and resettlement emoluments.
- II) Where access to private property or public resources/ places is severed, the contractor should provide safe temporary access that is both gender-friendly and usable by disabled persons. In this regard, temporary culverts instead of wood planks should be encouraged
- III) Children below 18 years shall not be recruited, where age cannot be ascertained, a letter from LCs shall be requested. All workers shall be required to produce their National Identification Cards to verify their age in order to avoid hiring children.
- IV) It shall be a mandatory requirement for all company employees to dress in full uniform with reflectors and further have labeled uniforms. This shall be for easy identification in case of child abuse
- V) Draft company policy on child rights and vulnerable people and sensitize all company workers on the policy
- VI) Carry out sensitization in schools on issues of drugs, sex, and fraternization with road contract workers

- VII) Encourage vulnerable youths to access employment with road contractors
- VIII) Ensure road side petty traders are facilitated to relocate

8.2.21 SPREAD OF HIV/AIDS AND OTHER COMMUNICABLE DISEASES

District level information suggest HIV/AIDS prevalence rates to be falling. However, concentration of workers in the locality and further improved human mobility will spur and accelerate development of structures along the selected roads. The influx of migrants labour and transit travellers will affect social structures including family stability leading to illicit sexual behaviour and multiple sexual patterns. This has the potential to increase the spread of HIV/AIDS and other STDs. Likelihood of this impact occurring is ranked as **low** since the selected roads are urban roads with already high population concentrations and level of impact magnitude as **high** even with current levels of awareness on HIV/AIDS within the population. Most adults have knowledge on the spread of the disease and have been sensitized on control measures though behavioural change can only be sustained through unrelenting awareness campaigns. Impact significance is thus **major**. The impact will hence be escalated to full impact analysis.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Mitigation

- I) The contractor shall involve local (LC) leaders in labour recruitment to ensure people hired have no criminal record.
- II) Local governments and the contractor shall collaborate with police to contain criminal activities.
- III) A register of all construction workers shall be filed with local authorities to aid in tracking cases of child neglect.

- IV) With the assistance of a competent sub-contractor, the contractor shall draft an HIV/AIDS policy
- V) Contractor shall procure a service provider for professional HIV/AIDS activities
- VI) The contractors shall put in place worker place committees to oversee implementation of HIV/AIDS control activities.
- VII) Contractor will provide counseling support and work based positive culture to posttest workers
- VIII) The contractor will provide condoms to all workers free of charge placed in private and areas of confidence.
- IX) Peer based awareness and counseling shall be instituted within the workforce.
- X) All workers (permanent or temporary) will be required to sign the project code of conduct prior to commencing their assignments.
- XI) A worker Grievance mechanism shall be established and operated.
- XII) Ensure that there is recruitment of (a) service provider(s) to support in prevention (sensitization) and response (referral pathway) activities.

Residual Impact: Following mitigation, residual impact will be of minor significance.

Impact management

As a contractual obligation, the contractor should have an HIV/AIDS Policy and action plan and implement it for this project.

Through posters, flyers or weekly sensitization sessions continually provide HIV/AIDS awareness to road construction workers.

Provide support to post test workers

8.3 OPERATIONAL PHASE POSITIVE IMPACTS

8.3.1 SAFER ROAD AND INCREASED BENEFITS TO ROAD USERS

The proposed upgrade of the selected roads will have positive, significant, and long-term local and national socio-economic benefits to the travelling public, trade and communities traversed by the selected road. Road construction will improve and strengthen the carriageway, improve visibility and introduce safety signage. All these improvements will achieve the following

- Safer roads with reduced accident risk.

The proposed upgrade will reduce accidents following road pavement strengthening to remove lacerations and introduction of better drainage. Upgrade will improve visibility and have road signs installed where none existed. Although speeds are expected to increase, it is anticipated that overall upgrade of the roads will reduce accident rates and fatalities.

Duration of this impact will be long-term and likelihood of occurring very **high** after roads have been upgraded. Benefit to road users will be of local, national and international spatial extent, hence **high** level of impact magnitude will be **high** and impact significance is **major**. The impact shall be escalated to the next phase of analysis to aid benefit enhancement.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Impact enhancement

- i) Contractor shall ensure that the road design provide facilities and signage for safe pedestrian crossing and traffic navigation.
- ii) The contractor shall liaise with the traffic police and install appropriate road furniture on all sections of the roads.
- iii) Appropriate design in urban areas should be followed that allow sufficient walkways for pedestrians especially school children. Similar provisions should be installed on sections near schools and health facilities
- iv) Sensitize communities along the constructed road on safety and the dangers caused by vandalizing road signage and other road furniture.

8.3.2 ENHANCED GENDER BENEFITS

Upgrading the selected town roads will enhance gender benefits accruing to vulnerable roadside women small scale traders. Improved accessibility and road safety will attract more people to their trading premises as well as improve sanitation, lower pollution and staining of their products which are mainly food items. The upgraded roads will further trigger inflows of supplies of agro products hence improving incomes of women. Of specific benefit to women could be greater participation in less strenuous household income generating activities including roadside retail trading or vending of food to

construction workers. This would be a long-term benefit to women most of whom currently earn a living working long hours on low pay dead end activities. The likelihood of this impact occurring is ranked as **high** and magnitude also **high**. Impact significance will be hence be **major**.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement:

The enhanced gender benefits shall be realized if women form viable self help SACCOs that will facilitate accumulation of savings and capital to enable them move into trade.

8.3.3 IMPROVED ACCESS TO SOCIAL SERVICES

An improved road will ease access to social services, most especially healthcare, education and administrative services. The project area is serviced by a regional referral Hospital in Arua, District Hospital in Adjumani and various Health Centers ranging from HCII to HCIV. Access to these facilities will be enhanced. This will definitely improve maternal health, reduce infant and maternal mortality. The above are significant, positive and long-term socio-economic cumulative impacts. Likelihood of occurrence of the impact is assessed to be **high** and level of impact magnitude deemed to be **high**. Therefore, the significance of this impact is **major**.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement:

Provision of ambulatory services will complement road development in easing access to Health Services especially referral hospitals. This can be achieved through collaborative efforts with the Ministry of Health.

8.3.4 LEVERAGE THE GROWTH OF THE NASCENT TOURISM SECTOR IN THE SELECTED TOWNS

The National Development Plan III (NDPIII) recognizes tourism as one of the key growth sectors of the economy. The sub region has potential tourism sites in Koboko, Yumbe and Moyo. The selected roads for upgrade will enhance access and visitor visual appeal to the towns.

The likelihood of occurrence of this impact is ranked as **High** and magnitude **High**. The overall significance is rated at **Major**. The impact will be escalated to the next level for appropriate enhancement planning.

Significance			Likelihood			
			Very low	Low	Medium	High
			1	2	3	4
Magnitude	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	High	4	4 Minor	8 Moderate	12 Major	16 Major

Enhancement measures

- I) Government should plan for the development of tourism sites along the route to improve existing itineraries especially around along the banks of the River Nile
- II) Plan to construct visitor huts along the road in future
- III) District Local Governments working with Central Government should plan to develop roadside markets selling crafts among other items to travellers in collaboration with NGOs operating in the region.

8.4 NEGATIVE OPERATIONAL PHASE IMPACTS

8.4.1 INCREASE IN MOTOR ACCIDENTS

Newly upgraded or constructed roads in urban areas usually lead to an increase in accidents especially caused by motor bike riders. Drivers and riders on newly constructed roads usually drive or ride faster than is often safe. This is a risky behavior that often leads to lots of fatal accidents that could have been avoided had road users been sensitized to follow road safety signage. Accidents are predicted to occur at pedestrian crossings and junctions often leading to loss of life or goods. Most common, are accidents involving motor bikes whose riders lack formal training in road use and casualties will include school going children.

The impact would be short-term but resultant effect long-term if no concerted effort is expended in sensitization of road users and local communities. Likelihood of occurrence has been ranked as **high** though can be reduced through sensitization campaigns for 1-2 months before road commission. Impact magnitude is also ranked as **high** since accidents may lead to loss of life. Impact significance is therefore **major**. The impact will be escalated to impact study and analysis to identify appropriate mitigation measures.

8.5 CUMULATIVE IMPACTS

8.5.1 NATURE OF PROJECTS

There are generally a few development interventions initiated or planned at different levels by various development actors that are being or will be implemented within the project area of influence. These are mainly infrastructure construction projects including road upgrade, construction of Large-Scale Solar water schemes, possible construction of a bridge over the Nile, power transmission and distribution lines, telecommunication infrastructure construction and maintenance of rural feeder roads. All these projects will involve activities that require earth construction materials (gravel, rocks and water), labour and will demand construction of equipment and labour camps. The concurrent or sequential implementation of these projects in addition to local commercial construction has the potential to generate cumulative impacts.

8.5.2 SPATIAL COVERAGE OF CUMULATIVE IMPACT ASSESSMENT

Assessment of cumulative impacts of the NERAMP Component 2 projects. The spatial coverage will include 2 TCs 3 districts and a Municipality. A number of infrastructure development projects are active within these major urban centers and are the focus of cumulative impact assessment.

8.5.3 TEMPORAL SCOPE OF THE ASSESSMENT.

Temporal scope of the assessment has been guided by the time frame for implementation of the road upgrade project which is anticipated to be between 3-5 years. Cumulative impact assessment has thus covered a 5-year period (2023- 2028). Anticipated projects and current interventions whose activities fall within this window have been included.

8.5.4 IDENTIFIED VALUED ECOSYSTEM COMPONENTS (VEC)

Taking into account Baseline studies within the project area of influence and a review of past, present and proposed future project activities reveal a number of Valued Ecosystem Components (VECs). These VECs are deemed to be significant aspects within the biophysical and socioeconomic environment that will be impacted by cumulative impacts associated with implementation of identified projects.

8.5.4.1 SURFACE WATER COURSES

The wetland sites identified are associated with surface water courses, these are either seasonal or permanent, extensive or narrow but do perform important ecological and social functions. Reasonable aquatic species were documented during the study though none was of conservation concern. They are however a source of domestic water mainly for livestock and further provide water for construction including road works. Excessive withdraw through abstraction by the multiple construction project has the potential to affect stream flow and habitat health for biological diversity.

8.5.4.2 ROCK QUARRIES AND GRAVEL BORROW AREAS

Rock quarries and potential borrow areas spread out along the entire project road. All projects, past, current or future require stone aggregate their products and gravel. The high demand for construction materials will exert excessive pressure on material source areas. Decommissioned sites could be reopened without proper assessment and management.

8.4.4.3 SHARED LAND CORRIDORS

Linear projects like roads, power transmission and distribution lines, water mains and telecom cables run along the current road alignment. A combination of road construction works, constant digging up to lay cables, sink holes for power lines among others leads to repetitive damage to the corridor even after restoration has been carried out. Both terrestrial and aquatic corridors will be affected hence exposing properties and the physical biological resources to degradation and damage. Also, lack of Compensation of such corridors may raise social and economic concerns.

8.5.4.4 SOCIAL SERVICES

The most critical service affected by multiple construction projects is health infrastructure. Increased inflow of workers may place a burden on health units. Security services may experience increased demand due to the inflow of workers.

8.5.4.5 GENDER AND SEXUAL HARASSMENT

Increased inflow of migrant labour working on different projects may increase the anonymity of workers and possible offenders. Because there are many contract workers it becomes difficult to isolate those engaged in illicit sexual behaviors and further individual involved in harassment of women. There are several on-going projects and activities by Government of Uganda, Possible concurrent implementation of all these projects and interventions within the same project area or in proximity of the road upgrade project has the potential to generate cumulative impacts.

8.6 LIKELY CUMULATIVE IMPACTS FROM ON-GOING PROJECTS

There are several on-going projects and activities by different Government Agencies. Possible concurrent implementation of all these projects and interventions within the same project area or in proximity of the project has the potential to generate cumulative impacts. The most critical cumulative impacts on valued environment and social system components will include:

8.6.1 POSITIVE IMPACTS

8.6.1.1 MULTIPLE SOURCES OF EMPLOYMENT AND INCOME

Projects being implemented in the project area have an employment component. They all have basic employment quotas for local residents within the three districts. This is a positive impact that will widen sources of income. However, multiple employment avenues may end up curtailing skills development and local workers may end up in cyclic oscillations from one project to another. A high labour turnover does not aid project implementation. Delayed progress may be recorded on all projects.

Impact Enhancement

- i) All workers shall be given employment contracts with clear terms of engagement and benefits
- ii) The contractor shall sensitize all workers on contractual obligations and benefits accruing to their loyalty to the employer.

8.6.2 NEGATIVE IMPACTS

8.6.2.1 COMPETITION FOR LABOUR

Related to multiple sources of income is competition for available labour hence pushing up local labour costs. All projects being implemented in the region are targeting the same labour pool to recruit for especially low skill and unskilled jobs. This may result into high labour turnover as potential employees oscillate from one project to another after

comparing remunerations and emoluments of the many options available. A fluid labour force limits contractor ability to impact skills.

IMPACT MITIGATION

- i) All company employees shall be given contract to employment specifying all terms of employment
- ii) Contracts shall specify skills training at the onset to encourage workers to take on long term commitments to the company
- iii) Incremental wages and other emoluments should be awarded to workers depending on period of service
- iv) Design other incentives aimed at manpower retention.

8.6.2.2 IMPACTS ON WETLANDS

Multiple projects operating within wetlands have a very high potential to impair habitats through fragmentation. In addition to the already existing road corridor, the power transmission lines will also open another corridor. These too many corridors some times close to each other have the potential to fragment habitats affecting biological resources. Disposal of spoil, construction waste and infilling will accelerate wetland degradation. This is an impact of major significance.

Impact Mitigation

- i) Form a joint wetland monitoring team under the leadership of respective District Local Governments
- ii) Undertake monthly joint monitoring of work in wetlands to ascertain ecosystem integrity
- iii) iii) Share infrastructure designs with other projects to limit land take in wetlands

8.6.2.3 IMPACTS ON SURFACE WATER COURSES

The main source of cumulative impact on surface water courses will be abstraction of water for construction purposes. Should the rate of abstract be high, the possibility of reduction in water levels is anticipated. Discharge of wastes will increase sediment loads and further compromise water quality especially if chemical spills occur. Declining water levels will impact aquatic habitats and their biodiversity. Communities that use water for domestic purposes and for watering livestock will be greatly affected. The significance of this impact is major.

Impact Mitigation

- i) A joint water abstraction task force shall be formulated under the ambit of respective District Water Officers
- ii) All projects shall be required to obtain water abstraction permits
- iii) As one of the regulations for water abstraction, volume of water abstracted by every truck must be recorded. Records must be filled with the respective District Water Officers and the Directorate of Water Resources Development.
- iv) As much as possible different projects shall not abstract water from the same stream.

8.6.2.4 IMPACTS RESULTING FROM MATERIAL EXTRACTION

Cumulative impacts related to extraction of construction materials from rock quarries, sand mines, and borrow areas will surface. All listed projects have either a road construction component or related infrastructure. Excessive pressure will be exerted on such areas leading to environmental degradation. Re-opening used quarries and borrow areas will be common as different contractors seek to cut costs. Where land owners seek to maximize benefits from their assets, different construction companies may rent sections on the same site complicating restoration responsibility. Managing footprints of material source areas is hence predicted to be an impact of major significance.

Impact Mitigation

- I) All material source areas shall be mapped and shared amongst all developers and respective District Local Governments
- II) Decommissioned material source areas (quarries and Borrow areas) shall not be reopened without commissioning an appropriate level of environment and social impact assessment.
- III) A chain of custody system for all materials shall be developed to certify sources and ensure responsible extraction practices

8.6.2.5 IMPACT ON PUBLIC UTILITIES AND INFRASTRUCTURE

Infrastructure construction projects by UEDCL, telecommunication companies and other service providers is taking place. These tend to pass through the same corridor along the proposed road. Lack of coordinated infrastructure development will lead to constant relocation of such facilities at a high cost. Also, there will be a challenge in compensation and relocation of affected households since they will always be affected by one service after another. The significance of this impact is ranked as medium.

Impact Mitigation

- I) All linear infrastructure projects shall share design drawings and submit copies to District Local Government physical planning Departments in the respective areas.
- II) Joint monitoring teams shall be constituted by project management in liaison with District Local Governments

8.6.2.6 GENDER AND SEXUAL HARASSMENT

Gender impacts associated with increased inflow of migrant labour working on different projects may increase the anonymity of workers and possibility of inappropriate sexual behaviors, harassment of women and young girls is bound to occur. Tracking offending individuals will be difficult since construction workers could be switching jobs from one company to another. The situation will be grave in urban centers where low skilled workers will reside as many females may fail to differentiate between companies and local authorities have no records on new residents. Given the lack of records and failure to differentiate workers this is an impact of major significance.

Impact Mitigation

- I) All companies shall provide unique colour coded uniforms to their employees and identification numbers for each employee
- II) All local authorities will be required to register new residents coming into their areas of jurisdiction and share records with respective companies
- III) Employee records shall be maintained by all companies to aid identification in the event of sexual harassment
- IV) Coordinate awareness campaigns on gender and sexual harassment with local authorities.

9.0 CONCLUSION AND RECOMMENDATIONS

9.1 CONCLUSION

The proposed implementation of NERAMP component II will follow as much as possible the existing alignment. Limited curve improvements have been suggested to improve road geometric parameters on sections where sharp bends exist and narrow junctions. Being a road upgrade project, both horizontal and vertical specifications will be improved to cater for safety and increased traffic volumes anticipated. Project operations shall be varied and diverse ranging from surveying, bush clearance and grubbing, earth works, construction of pavement layers and asphalt seals. Construction of drainage structures will be undertaken at appropriate prior designed sites and road furniture shall be installed to enhance road safety.

Overall NERAMP component 2 of the project will come with multiple benefits to the community, the region and international actors. Access to socioeconomic infrastructure including health and education facilities will be enhanced while community mobility will be eased. The provision of lighting on these roads will greatly disrupt the networks of criminals.

Much as negative impacts are predicted, these being existing roads for upgrade, impacts will not be severe to the level of greenfield projects. The level of impacts shall be moderated by the fact that upgrade projects mainly operate within existing Right of Way, have limited cut and fill operations and depending on civil works methods will not require extensive spoil dump sites. Important negative impacts triggered by the project and have received attention in this ESIA that if not well mitigated may encumber project sustainability include injurious damage to structures, relocation of utilities, , social ills of construction labour, gender impacts, occupational health and safety and disruption of school activities among others. Compromised air quality especially dust nuisance, noise, public safety are predicted on this project among others.

Based on the assessment contained in this document, most the anticipated negative impacts will be reversible, localized, short-term and can be mitigated through implementation of measures elaborated in this ESIA document.

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APPENDICES

APPENDIX 1 PROPOSED TERMS OF REFERENCE FOR CONDUCTING ESIA FOR UPGRADING SELECTED TOWN ROADS IN KOBOKO, YUMBE AND MOYO TOWNS.

These terms of reference (TOR) have been prepared following a comprehensive scoping exercise that has identified environmental and social impacts arising from the proposed upgrading of selected town roads in Koboko, Yumbe and Moyo towns. These Terms of Reference are purposely being drafted to focus the scope of the ESIA.

9.1 Scope of the ESIA

The proposed ESIA will adopt a life cycle approach targeting all project phases from commissioning to decommissioning. The study will establish and analyze site specific impacts resulting from road construction, worker campsite, equipment yards, material sources (rock quarries, borrow pits), waste storage areas, hazardous waste management including explosives and petroleum products. Other environment and social safeguards concerns to be assessed include worker safety, exposure to HIV/AIDS, vulnerability and social community concerns including gender relationships.

The area scope of the proposed ESIA will be divided into the Direct Impact Area (DIA) which has been set within the 20m corridor which is the set right of way and the Indirect Impact Area (INDIA) which has been set to cover the spatial extent of the municipalities. The impact area will be determined by the sensitivity of environmental and social receptors. In assessing impacts, temporal scales will be determined based on nature of project processes and sensitivity of the receptor environments. This is the only viable way to determine impact duration and how significant they will be.

The ESIA will propose viable and implementable mitigation measures for all identified impacts presented in such a manner that is easily comprehensible by the contractor, client's environmental monitoring team, the Bank safeguards team, NEMA, regulatory agencies and the supervising team.

9.2 Detailed Terms of Reference.

These Terms of Reference (ToRs) present specific tasks to be performed by the ESIA team. They are presented to reflect legal requirements as stipulated in the National Environment Act Cap 181, Guidelines for Environmental Impact Assessment in Uganda 1997 and Environmental Impact Assessment Regulations 2020. Reference to Environment and Social Framework and attendant Environment and Social Standards of the World bank has been made.

Task 1 Project Description.

The consulting team shall undertake a review of all relevant project documents so as to present a concise description of all project components and phases. The review will include

but shall not be limited to the engineering design report, materials report, hydrological assessment and other project design documents. Project description shall include among others the following components.

1. Project title and objectives
2. Describe project location with the aid of location maps/images
3. Describe the direct and indirect project impact zones
4. Present and explain aspects of the proposed road design
5. Describe construction and post construction activities
6. Present material sources and their nature
7. Describe the location, size and structure of worker camps, machine workshops and equipment yards.

Task 2 Presentation of the Biophysical Environmental Baseline

The consulting team will provide details of the biophysical environment of the project site and the impact zone. Using appropriate methods including maps, photographs and graphs the following aspects shall be presented:

1. Topography and drainage
2. Geology and soils
3. Hydrology and water resources
4. Climate
5. Biodiversity
6. Ambient air quality including noise and vibration

Task 3 Description of the Socio-economic Environment

A description of the socio-economic environmental baseline of the impact area shall be presented. The following aspects shall constitute the baseline.

1. Demographic Characteristics
2. Settlements
3. Livelihoods
4. Access to socio-economic infrastructure
5. General land use
6. Gender Relations
7. Land tenure
8. Vulnerable social groups
9. Physical Cultural Resource
10. Status of refugee settlements and their distribution

Task 4 Review of Relevant Legislative and Regulatory Framework

The consulting team shall undertake a thorough review of all relevant policy and legal provisions that have a bearing on the implementation of the selected town roads project.

In carrying out this task, due attention shall be accorded to international legal instruments to which Uganda is a signatory including conventions related to environmental management and sustainability. Policies and regulations of development partners will also be appraised in relation to the proposed roads upgrade. A review of World Bank Environment and Social framework and its Environment and Social Standards (ESS) shall be reviewed. Gap analysis will be carried out.

Task 5 Design a Stakeholder Engagement Plan and Undertake Stakeholder Consultation and Public Disclosure.

The consulting team shall come up with a Stakeholder Engagement Plan (SEP) in line with World Bank ESS10. The SEP shall be an all-inclusive document targeting appropriate levels of interests and concerns. Using appropriate methods of consultation, the team has identified key stake holders during scoping and engaged with them to a reasonable extent. More consultations with relevant national and local stakeholders to interface on views gained on the selected road project shall be undertaken. Consultations will be done in a transparent and interactive way that does not inconvenience participating groups especially of marginalized social groups. Public disclosure shall be done through a process that allows all directly affected groups access and meaningful appraisal of the ESIA. The following categories of stakeholders shall be further consulted during the ESIA and their views documented.

1. Relevant lead agencies
2. Regulatory bodies
3. Non-Governmental organizations
4. Local governments in the project areas
5. Communities along the proposed selected roads in Koboko, Yumbe and Moyo towns
6. Special interest groups in the project area including refugee settlements .

Task 6 Evaluation of Project Alternatives

The consulting team shall undertake an evaluation of viable project alternatives. Proposed alternatives should bear commensurate cost considerations and justification of preferred road design and technology shall be provided. Presented alternatives should be in line with project objectives and address identified environment and social costs.

Task 7 Determination, Assessment and Prediction of Potential Environmental and social Impacts

With reference to the environmental baseline, project description and processes, consultations and legal review undertaken, the consulting team shall predict and assess the positive and negative impacts likely to accrue to this roads project. Assessment of identified impacts shall be carried out using universally accepted methodologies. Where such methods are in doubt or unavailable, well synchronized and articulated methods shall be presented and justified. Assessment of impacts especially in ecologically sensitive

areas, impacts with high levels of un-certainty, or low level of prediction confidence, shall be guided by the precautionary principle.

An indicative list of potential impacts is hereby presented. The ESIA is not limited to these identified impacts, any issues that will arise out of field investigations, consultations and thorough legal review will be appropriately assessed and predicted. The impacts have been identified following the project cycle. Cumulative impacts shall also be identified and assessed.

Preconstruction Phase

- Employment opportunities
- Skills development

Construction Phase

The construct phase will be associated with a set of positive impacts. These shall be assessed by the team. The assessment will include but not be limited to the following:

- Employment opportunities to local communities
- Short-term roadside business opportunities for women in the project area
- Sourcing of construction materials from property owners

Operational phase

The following potential positive impacts shall be assessed and their likelihood of occurrence, magnitude and significance predicted

- Enhancement of economic activities especially tourism
- Improved road safety
- Increased gender benefits
- Enhanced access to social services

Negative Impacts

Based on preliminary field observations and consultations with various stakeholders, the following negative impacts are predicted subject to confirmation by the full ESIA. Using appropriate methods, the team shall assess and predict the significance of these impacts and any others that will emerge in the course of field investigations and consultations.

Construction Phase

- Land take for increased Right of Way
- Sourcing of road construction materials (gravel and stone)
- Demolition of structures within reserve of proposed road
- Traffic management during construction
- Loss of vegetation within the Right of Way
- Impacts on woodlots
- Loss of habitats for wildlife
- Introduction of invasive species

- Impacts of equipment yard and workers camp
- Occupational health & safety risks for workers
- Haulage of earth construction materials
- Impacts of storage of construction materials
- Improper management of cut to spoil
- Impacts on water courses and surface drainage
- Impacts on wetlands
- Impact on existing utilities along the road
- Asphalt plant impacts
- Construction waste
- Social ills of construction labour
- Disruption of school activities
- Impacts on Physical Cultural Resources
- Gender impacts
- Improperly finished road sites.
- Public health impacts associated with road construction.
- Spread of HIV/AIDS during construction.
- Disruption of traffic flows caused by improper traffic management at work sites.
- Constrained access to communities and social infrastructure during construction

Operational Phase Impacts

- 1) “New road effect” leading to accidents
- 2) Spread of AID/HIV and other communicable diseases on account of increased number of people in upcoming commercial centers

Task 8 Design Impact enhancement and Mitigation Measures

Based on impact analysis and predictions undertaken, views generated from consultations, the team shall design impact enhancement measures for positive impacts and further present mitigation measures for negative impacts. When designing Impact mitigation measures consultants shall demonstrate practical implementation of such measures. Mitigation measures will be designed in such a way as to reflect the mitigation hierarchy. Avoidance of impacts through careful planning shall constitute the de-facto principle in mitigation. Where avoidance is deemed insufficient, alternative technologies and approaches will be sought.

Task 9 Design an Environment and Social Management and Monitoring Plan

The consulting team shall undertake to develop an Environmental and Social Management and Monitoring Plan that will guide the contractor and supervising engineer in their operations to ensure environmental sustainability. The ESMMP will be a complete planning document detailing specific actions to be undertaken by the contractor during construction and later by MoWT to enhance environmental sustainability and road safety.

Task 10. Design a Grievance Redress Mechanism

The consulting team with reference to the ESIA and RAP and in consultation with MoWT, Local Authorities and project affected persons shall design a grievance redress mechanism for the project. The GRM shall be designed in conformance with MoWT Grievance Redress Mechanism and World Bank Requirements

Task 11 Develop A chance finds Procedure.

A chance finds procedure to guide the proper management of physical cultural resources during project construction shall be developed and appended to the ESIA.

Task 12 Undertake Public Disclosure and Report Validation.

The Engineer in consultation with MoWT and NEMA shall undertake to disclose the Environment and Social Impact Statement in line with requirements of the National Environment Act Cap 181 and further in compliance with World Bank Environment and Social Framework (ESF). Appropriate disclosure platforms shall be agreed upon to achieve comprehensive review and input for sustainable road design.

APPENDIX 2 STAKEHOLDER ATTENDANCE FORMS



Stakeholder consultation on selected town roads in Koboko-Yumbe-Moyo Districts

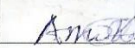
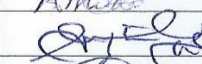

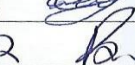
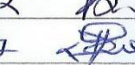

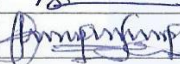




Location Zhongmei Board Room Date: 19.10.2026

ATTENDANCE LIST

S/N	Name	Gender	Title/Organization	Contact	Signature
01	Paul K. Musali	M	ICT/CAUFF		[Signature]
02	Willie Zon	M	Zhongmei		[Signature]
03	ROBERT MUSAHA	M	CEO - Moloit		[Signature]
04	DINA STEPHEN LOGI	M	SLO - Moyo DLG		[Signature]
05	DRICHTLE BRITSE	M	Town Engineer Moyo Town		[Signature]
06	Mawa Simon Peter	M	CEO - Mawit		[Signature]
07	YUKI MICHAEL	M	KEI - Consultant		[Signature]
08	Hiromasa NAGAI	M	KEI		[Signature]
09	TOKO CHRISTOPHER	M	F.O. Moyo DLG		[Signature]
10	Hellen Mugena	F	ICT/CAUFF		[Signature]
11	Martin Masozo	M	MOWT		[Signature]
12	Antoinette Nyamuzuru	F	Ecologist		[Signature]

Stakeholder consultation on selected town roads in Koboko-Yumbe-Moyo Districts






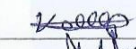
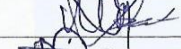

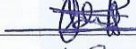

 Location Zhongmei Board Room Date: 19/02/2026
ATTENDANCE LIST

S/N	Name	Gender	Title/Organization	Contact	Signature
01	AMOKO CHARLES ADIE	M	TOWN AGENT MTC		
02	OYOYO SARA SUNDAY	M	DITY: PLANNING MTC		
03	GOLIGA GERHAM	M	SENIOR ENVIRONMENTAL HEALTH OFFICER Moyo TC		
04	ENZAMA PATRICK	M	FOR TOWN CLERK		
05	LUGA DAVIS	M	SEO-MYO DUA		
06	KUME WAN	M	ATC - KOSP		
07	Dreiga Daniel Kuis	M	SEO-KMC		
08	Ojia Susan	F	PCDD for TC - KMC		
09	FADHA BRAHMAN SAHIM	M	TOWN CLERK YIC		
10	IJOHA JAMAL	M	CEO - ZHO		
11	ASIMUSE ANNET	F	SO AGRICULTURIST		

Stakeholder consultation on selected town roads in Koboko-Yumbe-Moyo Districts

Location Zhongmei Board Room Date: 19/02/2026

ATTENDANCE LIST

S/N	Name	Gender	Title/Organization	Contact	Signature
1	Achiedi Alexio Beke	M	MowT Piu		
2	Pamela Kusimba	F	MowT Piu		PK
3	Florence Aweddy	F	SiHCl		
4	MURICE Oluoto	M	MowT-Piu		
5	CAKUSTIN Ismail	M	CBO Intert, Koboko Municipality		
6	Remo ASORE uloko	M	See below for Mayor's		
7	KEPO VICKY	F	ENG. Koboko MC		
8	Petson Ndyamanywa	M	Project HSS / MowT		
9	RAHMANOY HOAH	M	DPP / -DUG		
10	Adako Alfred	M	for DA / -DUG		
11	MUABE ROBERT	M	Emwatabrit		



江西中煤建设集团有限公司
ZHONGMEI ENGINEERING GROUP LTD

CIVIL WORKS FOR UPGRADING OF KOBOKO-YUMBE-MOYO ROAD (103.08KM) FROM GRAVEL TO PAVED (BITUMINOUS) STANDARD: PROJECT NO. 171339
 PROCUREMENT, REFERENCE NO. UNRA/WRKS/2020-2021/00151

ACTIVITY: District and Town Council Engagement meeting for Moyo
 LOCATION: Moyo Town Council
 DATE: 10/02/2026

ATTENDANCE LIST

S/N	NAME	GENDER	TITLE/ORGANISATION	SIGNATURE
1	MURAM ROSE	F	CEO - MTC	
02	Lorimbgu Alona	F	Town Agent - Glender	
03	MARUTIA VIVIAN	F	M.T.C. A.A	
04	BRICHALE BLAISE	M	As Town Engineer	
05	DPIRA JOEL	M	Moyo Town Council	
06	DPIRA JOEL	M	TRW - MOYO M	
06	SIAD PIERRE	F	M.T.C. A.A	
07	ALOYO SUSAN	F	TRAINEE ADMINISTRATOR	
08	KATO JOSEPH	M	Emt-officer - M.D.L.S	
09	COLYA LUBAN	M	SETHO MTC	
10	M-ADBARA BOSCO	M	PHRO-for CAO MOYO	
11	BRICHALE YEPI F	M	S.A.T.C	

APPENDIX 3 STAKEHOLDER ENGAGEMENT PHOTOGRAPHIC RECORD

Moyo, Yumbe and Koboko District and Town and Municipal Council Officials

19/02/2026



CAMON 20 ●
2026.02.19 11:19

24mm f/1.7 1/33s ISO493
3°31'17"N 31°18'59"E



CAMON 20 ●
2026.02.19 11:19

24mm f/1.7 1/50s ISO436
3°31'17"N 31°18'59"E

Moyo, District and Town Council Officials

10/02/2026



CAMON 20 •
2026.02.10 10:45

24mm f/1.7 1/50s ISO2
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CAMON 20 ●
2026.02.10 17:18

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Yumbe District and Town Council Officials

09/02/206



CAMON 20 ●
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CAMON 20 ●

2026.02.09 12:01

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3°28'13"N 31°14'52"E



CAMON 20 •
2026.02.09 17:07

24mm f/1.7 1/33s ISO994
3°28'13"N 31°14'52"E

CV for Dr. Paul Kijobo MUSALI (Team Leader)

CURRICULUM VITAE

Names Paul Kijobo MUSALI
Profession: Environmental Consultant, Researcher and Trainer
Date of Birth: 01/06/1966
Nationality: Ugandan

Membership in Professional Societies:

1. Member, Uganda Association for Environmental Impact Assessment
2. Member of the Academic Partnership for Environment and Development Innovations in Africa (APEDIA)

Key qualifications:

Paul Musali holds a PhD in Natural Resource Management from the University of East Anglia - United Kingdom, a Master's Degree in Land Use and Regional Development Planning from Makerere University - Uganda obtained in 1996, a postgraduate diploma in Education, and Bachelor's Degree in Geography.

He has over 26 years of graduate experience in Environment Management, Environmental Impact Assessment (EIA), Environment Audit, design of Environment Management Systems and preparation of Environmental Management and monitoring Plans (EMP-ESMMP), design of Occupational Safety and Health management plans and risk assessment. In general, he has a strong background in environment management and development, achieved through a long period of training, employment in the civil service, University teaching, research and providing consultancy services. His competencies in environment and development span through natural resource management, waste management, audit and planning, climate change, land use planning, environmental management systems, wetland action planning, biodiversity project planning, participatory natural resource management, gender assessment and livelihood sensitivity analysis.

Furthermore, Paul Musali is skilled in GIS aided planning, climate change studies, vulnerability/risk assessment and adaptation, among others. During his studentship, he made presentations on household resilience paths and adaptation to climate change in rural communities.

Education:

Institution [Date from – Date to]	Degree(s) or Diploma(s) obtained:
University of East Anglia, UK 2004- 2008	PhD Natural Resources Management
Makerere University, Kampala Uganda 1993-1996	Master’s Degree in Land Use and Regional Development Planning
Makerere University, Kampala Uganda 1992	Postgraduate Diploma in Education
Makerere University, Kampala Uganda 1987-1990	Bachelor’s Degree in Geography specialising in Physical Geography

Other Relevant training:

- Attended a one month course on promotion of environmental administration in developing countries at the centre for public administration in Berlin, Germany. Main topic: principles and procedures of EIA in 1993.
- Attended a seven weeks course in Project planning for biodiversity conservation at the University of Bradford UK in 1994. Main topic: EIA and Audits as tools for Environmental Management.
- Participated in the UNEP organised training of Environmental Impact Assessment hosted by Makerere University Institute of Environment and Natural Resources in 1997.
- Undertook training in assessment of impacts associated with handling and disposal of hazardous wastes in training sessions organised by the Anglophone Basel convention secretariat in conjunction with NEMA. The first training was held at the Vista University, South Africa in 2001 and later in Kampala in 2002.
- Undertook a 10 weeks training in natural resource management conducted by the International Institute for Geo-information Science and Earth Observation In 2003 at Enschede the Netherlands . Participated in developing a case study on the Kampala Northern bypass using Remote sensing and GIS.
- Audited a course on Environmental Assessment in his first year of PhD studied at the University of East Anglia in 2005 while.
- Undertook a 1-month training on environmental management in the Oil and Gas Sector conducted by Wildlife Conservation Society 2011.

Research and Teaching

My teaching and research areas cover a wide spectrum ranging from Environmental Health to Conflict resolution in Natural resource management. Over the last twenty years, I have handled courses in Environment Health, Principles of Natural Resource Management, Wetland and Water Resources Management, Conflict Resolution in Natural Resource Management, a Development Geography of Africa, Environment Impact Assessment and Audit, and integrated Watershed Management.

Employment Record:

Paul Musali works as an Environmental Consultant, Researcher and Trainer. His most relevant project experience is described in the following paragraphs.

Name of Project Environment and Social Due Diligence for Eastern & Southern African Trade & Development Bank (TDB) on Various Projects (Kasulu Sugar Works, The United Republic Of Tanzania, All in Trade and Soleil Power Limited Uganda, and Source Energia Mozambique.

Year 2023 on Going

Position Team Leader

Client GMT Consultants under contract from TDB

Activities Performed: Undertake overall leadership on Environment and Social Due Diligence mission to

access compliance with IFC performance Standards on projects seeking funding from TDB. Specific duties including gap analysis for existing Environment and Social Management Systems and gap filling where necessary.

Name of Project: Feasibility Studies and Detailed Design for Upgrading Kamuli-Kaliro-Saaka-Pallisa Road

(89km)

Year 2023-2024

Position ESIA Team leader

Client KOM consultants under contract from UNRA

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Name of Project: Feasibility Studies and Detailed Design for Upgrading Manibe-Kulikulinga-Obongi-Adjuman

Road (138km)

Year 2023-2024

Position ESIA Team leader

Client LEA/ KOM consultants under contract from UNRA

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

Scoping, detailed ESIA baseline studies and report writing.

Name of Project: Upgrade of Atiak-Laropi Road (66km)

Position: Lead Auditor

Client: STRABAG International

Activities Performed: Audit of project auxiliary facilities including camps and equipment yards, quarry and

Asphalt plant

Name of Project: Feasibility Studies of large solar powered piped water supply systems and

Sanitation facilities in rural growth centre, Adjumani and Lamwo district

Position Team Leader

Client Pinnacle Consults Ltd under Contract from Ministry of Water and Environment

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation, Scoping, detailed ESIA baseline studies and report writing

Name of Project Design Review and Construction Supervision of Selected KCCA roads funded by African

Development Bank

Year 2023 on going

Position Environmentalist

Client Kampala Capital City Authority (under Leah in JV with DENMAR)

Activities Performed: Construction Supervision to enforce compliance with Environment and social Safeguards

Name of Project: Upgrading of Hoima –Butiaba-Wanseko Road upgrade (115km)

Year 2022-2023

Position: Lead Auditor

Client: CICO under contract from UNRA

Activities Performed: Audit of project auxiliary facilities including camps and equipment yards, quarry and asphalt plant

Name of Project Consultancy Services for the Review and Update of the General Specifications for Road and Bridge Works

Year 2021-2023

Position Environmental Specialist

Client Ministry of Works and Transport (under Leah in JV with DENMAR)

Activities Performed: Review and Update the Environment Aspects of the General Specifications for Road and Bridge works. Assignment included aspects of Climate Proofing Road Construction

Name of Project: Consultancy Services for Reviewing, Updating and Production of an Urban Roads Design Manual

Year 2021-2022

Position Environmental Specialist

Client Ministry of Works and Transport (WSP South Africa in JV with KOM Consultants)

Activities Performed: Review and update the Urban Road Design Manual including inclusion of specifications for the inclusion of Climate change adaptation, Informal Sector, green city requirements

Name of Project: Upgrading of Atiak –Laropi Road 66Km

Year 2021-2022

Position: Lead Auditor

Client: STRABAG International

Activities Performed: Audit of project auxiliary facilities including camps and equipment yards, quarry and asphalt plant

Name of Project: Feasibility Study and Detailed Design for Upgrading Kumi-Ngora-Serere-Kagwara Road (95km)

Year 2021-2022

Position ESIA Team Leader

Client Leah In JVA with KPM Consultants under Contract from UNRA.

Activities Performed: Team Leader for environment and Social Impact Assessment. Overall coordination and

drafting of the ESIA in accordance with Equator Principles and World Bank Standards

(ESS)

Name of Project: Feasibility Study and Detailed Design for Upgrading Karenga-Kapedo-Kaabong road

(67km)

Year 2021

Position ESIA Team leader

Client Leah and KOM consultants under contract from UNRA

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Name of Project: Feasibility Study and Detailed Design for Upgrading Bwondha-Mayuge-Iganga road

links, Bugiri-Nankoma Link and Namayingo Lugala (93Km)

Year 2021

Position ESIA Team leader

Client Leah and KOM consultants under contract from UNRA

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Project Name: Consultancy Services for Construction Supervision of the Design and Build Contract for Najjanankumbi-Busabala Road, Munyonyo Spur Interchange and Service Roads

Year: 2021 –ongoing

Position: Supervising Environmentalist

Client KOM Consulting Engineers and Planners

Activities performed Environmental supervision of the ESIA process and construction phase

Name of Project: Feasibility Study and Detailed Design for Upgrading Muko-Katuna-Muko-Kachwekano-Kamuganguzi road (104.6km)

Year 2021

Position ESIA Team leader

Client Adriax consultants under contract from UNRA

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Name of Project: Feasibility Study and Detailed Design for Upgrading Kazo-Buremba-Kyegegwa (82km)

Road Upgrade project

Year 2020

Position ESIA Team leader

Client KOM Consult U Ltd under contract from UNRA

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Name of Project Feasibility study and Detailed Design for Upgrading Muhanga-Kisizi-Rwanshamire road

(78.8Km).

Year 2020

Position Team Leader

Client Sering/Anchor Engineering Services

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Name of Project Atiak –Laropi Road Upgrade Project (66Km)

Year 2020

Position Environmental Consultant

Client Strabag International

Activities Performed: Drafting Contractors Environment Management Plan. Assessment of quarry and camps

Name of Project: Northern North Eastern Road Corridor Asset Management Project (NERAMP) Lot 2 Soroti-

Dokolo-Lira-Kamdini (189.4km)

Year 2020

Position ESIA Team Leader

Activities Performed: Overall management and supervision of the ESIA process including team mobilisation,

scoping, detailed ESIA baseline studies and report writing.

Name of Project: ESIA study during Feasibility Studies for Upgrade of the Koboko-Yumbe –Moyo Districts.

Year November 2019 to February 2020
Position ESIA Team Leader
Client JBN Consultants under contract from UNRA
Activities Performed: Overall management and supervision of the ESIA process including report writing and impact analysis

Name of Project Construction of Low (11kv) and Medium (33kv) Power Distribution Lines in Western Uganda (Bushenyi, Mitooma, Rukungiri and Kasese Districts)

Year June 2019 – Ongoing
Position Environmentalist for Contractor
Client Rocktrust Contractors Uganda Limited
Activities performed Undertake drafting of Environment and social management Plan for the construction of transmission and distribution lines in the 4 districts. Undertake to coordinate the Environment and social management on the project

Contact Person Francis Sembatya Mob 0392944516

Name of Project Kapchorwa-Suam Road Upgrade Project (72km)
Year August 2018-March 2019
Position Team Leader
Client China State Construction Engineering Corporation (CSCEC)
Activities performed Undertake drafting of Environment, Safety and Social Plan for the road upgrade project. The ESMP was drafted for approval by UNRA and AfDB the funding Agency. Additional activities included undertaking ESIA for Workers Camp and Equipment yard.

Contact Person Immelia Namukasa Mob 0772 439383

Project Name Feasibility Studies and Detailed Design of Mega Irrigation Schemes Agoro Hills, Nyimur, Purongo, Pailyec, Mucwini, Lagoro, Atyak, Imvepi, Aswa

ranch, Irrigation Schemes in Lamwo , Amuru
and Nwoya Districts

Year Dec 2018 Dec 2019

Position Environment Specialist

Client HDROARCH under contract from Ministry of Water and Environment

Activities Undertake environmental screening and baseline studies for proposed irrigation schemes. Carryout Environment and social impact Screening for the entire scheme

Contact Person Eng Cong 0772500697

Name of Project Environment and Social Impact Assessment of Mukono-Katosi 33kv line and Iganga Substation transmission line (33kv) upgrade

Year 2018

Position Team Leader

Client UMEME

Activities Undertake overall project management on environment and social impact assessment for the line upgrade project

Contact Person Ms Beatrice Nambi 0782 969986

Name of Project Hoima-Butiaba-Wanseko Road Upgrade Project

Year 2018

Position Environment Management Consultant for the contractor

Client CICO

Activities Performed Lead Consultant responsible for drafting Environment and Social Management and Monitoring plan including OHS plan, Spoil Management Plan, Material source areas management Plans, Decommissioning plans, Gender main streaming plans, Hazardous waste management plan, oil spill management plans, waste water treatment plans, biodiversity management plans among others. The consultant has also lead the ESIA team for Rock Quarry and Camp and Equipment Yard establishment

Contact Person Eng Mao Jiawei 0786 039 688

Name of Project Environment and Social Audit of Isimba Power Dam Construction Project

Year 2018

Positon Natural Resource Specialist

Client Ministry of Energy and Mineral Resources (JBN Consultants)

Activities Performed Undertake compliance audit of selected themes on the Isimba Power Dam

construction including biodiversity, rock quarry, borrow areas, runoff management, transmission line work sites

Contact Person Mr. Moses Basooma 0772 459 792
Name of Project Construction of Rugendabara and Kibiito Switch Stations
Year 2017 on going
Position ESIA Team Leader
Client UMEME
Activities Performed Team leader for ESIA for the two switch stations
Contact Person Ms Beatrice Nambi 0782 969986

Name of Project: Hima-Katunguru Road Rehabilitation Project
Year 2017 on going
Location Uganda
Position Supervising Environmentalist
Client LEA/KOM on behalf of UNRA
Activities Environment and Safety monitoring and supervision of the contractor
Contact Person Eng Betty Nakamya 0772 468 356

Name of project : Mubende-Kakumiro-Kibale –Kagadi Road Upgrade Project
Year 2016 on going
Location Uganda
Position Team leader
Client China Communications Construction Company (CCCC)
Activities performed Drafting Environment and Social Management Plan to guide road works
Contact Person Eng Feng 0785 876 369

Name of Project : Soroti-Moroto section 1 (100km)
Year June – On going
Location Uganda
Position Team Leader (Environment and Social Management for the Contractor)
Client China Communications and Construction Company (Under contract from UNRA)
Activities Performed Team leader responsible for drafting Environment and Social Management and
Monitoring plan including OHS plan, Spoil Management Plan, Material source
areas management Plans, Decommissioning plans, Gender main streaming
plans, Hazardous waste management plan, oil spill management plans among
others

Contact Person Mr. Maa 0776 780 027
Name of Project: Bumbobi – Lwakhakha (45km) Highway (AfDB)
Year 2016 on going
Location Uganda
Position Environmentalist
Client UNRA (SGI Consultants)
Activities Performed Design Review and construction supervision
Contact Person Eng Zenegali 0780 505 267

Name of Project: Kamuli Municipality Road Construction and Other Selected Roads
Year 2016
Location Uganda
Position Team Leader (Environment and Social Management for the Contractor)
Client CICO (under contract from UNRA)
Activities Team leader responsible for drafting Environment and Social Management and Monitoring plan including OHS plan, Spoil Management Plan, Material source areas management Plans, Decommissioning plans, Gender main streaming plans, Hazardous waste management plan, oil spill management plans among others
Contact Person Eng Moon 0783 545 392

Name of Project Kitgum –Kidepo Valley Highway (115.8km) Road Upgrade (world Bank funded)
Year 2015-2016
Location Uganda
Position ESIA Team leader
Client UNRA
Activities Performed ESIA Team Leader
Contact Person Eng Betty Nakamya 0772 468 356

Name of Project Kapchorwa-Suam Highway (77km) (AfDB funded)
Year 2015
Location Uganda
Position ESIA Team Leader
Client UNRA
Activities Performed ESIA Team Leader
Contact Person MR. Patrick Kamanda 0772 982 900

Name of Project Kibuye –Busega-Mpigi Expressway (31km) AfDB
Year 2015

Location Uganda
Position Team Leader Natural Resource Specialist/Environmentalist
Client GAUFF JBG
Activities performed Lead team for ESIA Update
Contact Person Eng Timothy Barasa 0772 501 066

Name of Project Environment Audit of Ferdsult Pole Treatment Plant in Buikwe
Year 2015
Location Uganda
Position Deputy Team Leader Natural Resource Specialist
Client Ferdsult
Activities performed: Lead Natural Resource Audit section
Contact Person George Ogut 0785 930 840

Name of Project : Environment Audit of Fort-Portal –Bundibugyo-Lamia (103km) road Upgrade project

Year 2014
Location Uganda
Position Held Natural Resource Specialist (deputy team Leader)
Client CICO Uganda
Activities Performed: Deputize team leader and overall supervision and coordination of the audit
Contact Person George Kabagambe 0772525362

Name of Project Acholi-Bur –Kitgum-Musingo Road Upgrade Project (86km) (World Bank)
Year 2014
Location Uganda
Client CICO
Position Held Environmental Advisor
Activities Performed. Drafting Environment and Social Management Plan
OHS Policy and plan
ESIA team member for Camp and Quarry
Contact Person George Kabagambe 0772525362

Name of Project: Environment Audit of Gulu –Atiak Road Upgrade Project
Year 2014
Location Uganda
Client China Henan International Corporation (CHICO)
Position Natural Resource Specialist
Activities Performed: Design and implement tools for Natural Resource Audit
Contact Person Walter Okot 0777 216 981

Name of project Kamwenge- Fort-Portal Road (66km)Upgrade Project (World Bank funded)

Year: 2014
Location: Uganda
Client: GAUFF Consulting Engineers
Position held: Environmentalist
Activities performed: Lead Environmentalist on Design Review and supervision.
Contact Person Eng Timothy Barasa 0772 501 066

Name of Project Acholi-Bur –Kitgum-Misingo Road Upgrade Project
Year 2014
Location Uganda
Client CICO
Position Held Environmental Advisor
Activities Performed. Drafting Environment and Social Management Plan
OHS Policy and plan
ESIA for Camp and Quarry
Contact Person George Kabagambe 0772525362

Name of project Mukono-Katosi-Kisoga-Nyenga Road Upgrade Project
Year: 2014
Location: Uganda
Client: EUTAW Uganda
Position held: Environmentalist
Activities performed: Environmentalist on Drafting of the ESMMP .

Name of project Gulu-Atiak Road Upgrade Project (World Bank funded)
Year: 2013
Location: Uganda
Client: CICO china
Position held: Environmental Auditor
Activities performed: Environmental Audit Team for the entire project
Contact Person Walter Okot 0777 216 981

Name of project: Greater Kampala Road Improvement Project (Flyover JICA funded)
Year: 2013
Location: Uganda
Client: JICA
Position held: Environmental Advisor

Activities performed: Technical advisor to ESIA team during feasibility study

Contact Person **MR. Patrick Kamanda 0772 982 900**

Name of project: **Fort-Portal Bundibugyo –Lamia Road (103km) Upgrade Project (AfDB Funded)**

Year: 2013

Location: Uganda

Client: CICO china

Position held: Team Leader Environmental Audit Team

Activities performed: Environmental Audit Team member for the entire project

Contact Person **George Kabagambe 0772525362**

Name of project: **Upgrading Bobi-Corner Ayer Highway (World Bank Funded)**

Year: 2013-ongoing

Location: Uganda

Client: LEA International in Association with KOM Consult Ltd

Position held: ESAI TEAM Leader

Year: 2012-2013

Location: Uganda

Client: China Communications Construction Company Ltd.

Position held: Environmental Consultant

Activities performed: 1. Lead Consultant on Drawing Environmental Management Plan for the project

2. Consultant on ESIA for Bamutakude Quarry

3. Designing wetland management plans for Spoils.

4. Consultant on ESIA for Asphalt plant.

Contact Person **Eng Betty Nakamya 0772 468 356**

Name of project: **Upgrading Gulu –Atiak Highway (74 km) (World Bank Funded)**

Year: 2012 - On going

Location: Uganda

Client: China Henan International Cooperation Group (CHICO)

Position held: Environmental Consultant

Activities performed: 1. ESIA team member for rock quarry and base camp
2. Draw up project environment management plan
3. Supervise drafting of borrow pit management plans
4. Under take routine Environmental Supervision of the entire road construction project

Contact Person **Walter Okot 0777 216 981**

Name of project: **Up-grading Vurra-Arua- Koboko-Oraba Highway (92km) (World Bank Funded)**

Year: 2011 - On going

Location: Uganda

Client: Comptran Engineering and Planning Associates.

Position held: Environmental Consultant

Activities performed:

1. Advise Chongqing International Construction Cooperation (CICO) on Environmental Management Plans
2. Supervise the implementation of the ESIA
3. Supervise the development of Environmental Management and Monitoring Plan
4. Monitor different scenarios to account for expected impacts resulting from road construction
5. Under take routine Environmental Supervision of the entire road construction project

Name of project: **Upgrading Hoima- Kaiso Tonya Highway**
Year: December 2011 - On going
Location: Uganda
Client: SGI Studio Galli Ingegneria S.p.A. / X-treme Ltd
(for the Uganda National Roads Authority - UNRA)

Position held: Supervising Environmentalist
Activities performed:

1. Supervise the implementation of the ESIA
2. Supervise the development of Environmental Management and Monitoring Plan
3. Monitor different scenarios to account for expected impacts resulting from road construction
4. Under take routine Environmental Supervision of the entire road construction project

Contact Person Eng Zenegali 0780 505 267

Name of project **Design of Ziobwe- Luwero, Luwero-Wakyato, Mityana-Kanoni and Kyegegwa-Kazo roads (191.2 km) (world bank)**
Year: October 2011 - Jan 2012
Location: Uganda
Client: SSI Engineering and Environmental Consultants (Pty) South Africa Ltd
Position held: Team leader ESIA
Activities performed:

1. Team member for the ESIA team
2. Coordinate a team of environmental consultants
3. Design the entire ESIA study
4. Draft initial environment and social impact strategy documents
5. Coordinate field studies
6. Draft ESIA
7. Draw up Environmental Management and Management Plan
8. Organise public participation and disclosure

Contact Person **MR. Patrick Kamanda 0772 982 900**

Name of project: Rehabilitation of Jinja –Kamuli Road (57km)
Year: April 2011 - October 2011
Location: Uganda
Client: Dott Services Limited engineering Contractors
Position held: Natural Resources Specialist (Deputy Team Leader)

Activities performed: Undertake Environment and Social Impact Assessment for Butagaya and Idome rock quarries Jinja District

Name of project: **Design of the World Bank funded Kamwenge – Fort Portal road (66km) (world bank funded)**

Year: May 2010 - March 2011

Location: Uganda

Client: AWE Environmental Engineers

Position held: Natural Resource Specialist / Environmentalist / Deputy Team Leader

Activities performed: 1. Coordinate field activities on Environmental and Social Impact Assessment
2. Coordinate public consultations and exposure
3. Draft environmental and social impact guidelines
4. Draft ESIA
5. Draw up Environmental Management and Management Plan
6. Organise public participation and disclosure

Contact Person DR. Lameck Kajubi 0782 580480

Name of Project World Bank Funded Secondary School infrastructure project

Year Oct 2012

Location Uganda

Client Ministry of Education through Kampala institute

Position Held Environmental trainer for secondary school construction teams

Name of project: **Drafting of 2009 – 2013 Strategic Plan for the Office of Tourism and National Parks (ORTPN), Rwanda.** Environmental Management and Monitoring Plan for the conservation strategies and infrastructure including advising on the nature of physical infrastructure including roads, hotel establishments and fire observation towers constructed in the three National Parks in Rwanda.

Year: October 2008 - January 2009

Location: Rwanda

Client: AHI Consultants

Position held: Team Leader and Conservation Consultant.

Activities performed: 1. Team leader and conservation consultant.
2. Constitute a team of specialist consultants
3. Organise logistical support
4. Coordinate internal consultations within ORTPN
5. Coordinate External consultations within Rwanda Government and Private Sector organisations
6. Undertake SWOT and PESTEL analysis of ORTPN
7. Designing Environmental Management and Monitoring Plan for the conservation strategies
8. Design Conservation sensitive infrastructure for the parks
9. Produce a draft strategic plan for ORTPN

Name of project: **Kampala Northern Bypass**

Year: April 2003 - September 2003
Location: Uganda
Client: Makerere/ITC
Position held: Team Member and Socio-Ecological Specialist
Activities performed: Development of GIS Based Model of EIA for Kampala Northern Bypass

Name of project: **Road Rehabilitation Works (drainage and widening works) in Kamuli District Local Government covering the counties of Bulamogi, Budiope and Buzaya**

Year: March 2001 - August 2001
Location: Uganda
Client: Kamuli District Local Government
Position held: Lead Environmental Consultant and Compliance supervisor
Activities performed: Environmental consultancy for Feeder Roads reshaping, drainage and widening works in Kamuli District

Name of project: **Transport and communication sector plan for the Lake Victoria basin region.**

Year: August 2000 - Dec 2001
Location: Uganda
Client: African Development Bank Initiative
Position held: Lead Consultant/Natural Resources Specialist
Activities performed: EIA of Transport and Communication Sector Plan for Lake Victoria Basin Region.
This was a regional project assessing road transport and communication development in the East African region. The report produced was expected to guide investments in transport for the targeted region.

Name of project: **Opening, widening, reshaping and drainage improvement of feeder roads in Hamurwa, Kitumba and Rubaya sub-counties, Kabale District**

Year: 1999
Location: Uganda
Client: Africare
Position held: Environmental Expert
Activities performed: Preparation of the EIA

Name of project: **Action plan for the organisation of the towns surrounding lake Victoria**

Year: 1997 - 1997
Location: Uganda
Client: Lake Victoria Urban authorities Association
Position held: Team Leader and Environmental Expert
Activities performed: Development of Background Documents for Lake Victoria urban transportation network. The plan targeted water & road links among member local authorities.

Name of project: **Mityana – Mubende Road**

Year: May 1994
Location: Uganda
Client: Government of Uganda
Position held: Environment Officer
Activities performed: Assessment and monitoring of environmental impacts that arose from the initial construction stages of the Mityana – Mubende Road road

Name of project: **South Western Uganda Development and Conservation project**
Year: October 1994
Location: Uganda
Client: Government of Uganda
Position held: Environment officer
Activities performed: Assessment of viability of feeder road networks and their impacts on Conservation Areas in South Western Uganda.

Relevant Environmental Management outreach, Training and Research:

- 2015 ongoing Research Associate on Building Resilient Ecosystems and Livelihoods to Climate Change and Disaster Risks. (SIDA funded)
- 2012-2015 Principal Researcher on Resilience and Adaptation to Climate Change in Post Conflict Communities in Uganda Sida Funded Research
- July 2014 Associate Consultant on USAID funded training on Environment Assessment for the oil and gas industry in Uganda.
- July 2009: Lead trainer on introductory EIA course run by the Department of Geography Makerere University in conjunction with NEMA.
- May 2009: Team leader responsible for designing a training dummy road impact assessment project based on the Wakiso to Matuga road. The training dummy project involved assuming the construction of a dual carriageway linking Wakiso to Matuga.
- August 2007 - March 2008: Peer trainer on worker safety at Peacock Norwich City Castle middle stores. He was responsible for training fellow workmates on safety regulations as contained in the work safety manual of the corporation and further carry out periodic safety assessments within the stock rooms.
- 2001/2002: National Counterpart on the English speaking Africa regional hazardous waste assessment project based at the Basel Convention Centre at Vista University South Africa. He was responsible for identification and assessment of hazardous waste management practices in health facilities, industrial establishments among others in Kampala.
- 2002-2004: Team member and natural resources expert on the National Land Use Policy Technical Committee. The committee drafted the national land use policy. He was specifically responsible for ensuring that the policy gives due attention to conservation as a land use.
- 2000-2004: Team leader community training in highland participatory natural resource assessment studies. This project involved training students in participatory

rural appraisal for natural resource management in the Kigezi Highlands. The studies produced rural household profiles. Community Environment Action Plans were produced for over 45 villages in the highlands

- 1999: Principal Investigator on the Evaluation of Decentralised Natural Resource Management in Uganda research projects funded by Rockefeller foundation. He conceptualised and designed the entire research project which was funded to the tune of US \$ 25,000 over a 3 year period.
- 1998-2003: Principal Researcher/trainer in urban sanitation. He designed a training and research programme targeting sewage and solid waste management and portable water provision. The project focused on solid waste characterisation at the Kitezi landfill station, sewerage system in slum settlement in Kawempe division.
- 1997-2004: He was coordinator of the environment Management Program in the Department of Geography Makerere University. He designed the degree programme and undertook overall administration and teaching EIA, environmental health, Sustainable development and coordinate field training.
- 1996: Team member of the national task force on natural resource assessment in the rangeland of the cattle corridor. He was tasked to collate data on resource extraction and land use for planning purposes. The study also targeted road infrastructure development to service commodity markets.
- 1996: Team member on the Department of Environment team that audited Hima Cement works. He was responsible for assessing occupational safety and natural resource extraction practices.
- 1995: National Biodiversity officer on the GEF/UNDP funded Institutional Capacity Building Project for the protection of East African biodiversity. He was responsible for technical project back stopping, project administration and routine tasks. The project also accomplished a national biodiversity inventory.
- 1995: Team member responsible for occupational safety on the Department of Environment Protection task force on assessment of environmental conditions in Fish processing plants in Jinja, Kampala and Entebbe.
- 1995: Team member on the task force that assisted Kampala City Council Select suitable sites for the location of a sanitary landfill station. He was also a natural resource and community specialist on the team that assessed the Kitezi landfill station.
- 1994: He was part of a team of officers from the Department of Environment Protection which assessed Environment conditions in pharmaceutical establishments in Jinja and Kampala responsible for assessing occupational safety and resource management.

Languages (excellent, good, fair, or poor):

Language	Speaking	Reading	Writing
English	excellent	excellent	excellent

Signature

A handwritten signature in blue ink, consisting of several horizontal strokes and a vertical stroke that loops back to the left.

Paul Kijobo Musali

6/5/2021

CV for Mr. Martin Kasozi (Social Development Specialist)

Position Title and No.:	Social Development Specialist
Name of Expert:	Martin Kasozi
Date of Birth:	6 th June 1981
Country of Citizenship/Residence:	Uganda

Education:

Master of Arts in Sociology, Makerere University – Uganda, 2024
Bachelor of Arts in Social Sciences in Social Admin, Economics & Gender Studies, Makerere University, 2005
Postgraduate Diploma in Gender & Local Economic Development, Makerere University – Uganda, 2025
Postgraduate Diploma in Environmental Impact Assessment, Makerere University - Uganda, 2022
Postgraduate Diploma in Public Policy and Governance, Uganda Management Institute, 2018

Other trainings:

Postgraduate Certificate in Data Analysis using SPSS & STATA, Makerere University - Uganda, August to Sept, 2017
Certificate in Environmental & Social Impact Assessment, NEMA/UAIA/Makerere University - Uganda, Sept – Nov 2022
Certificate in Protection from Sexual Exploitation & Abuse & Sexual Harassment, World Bank-funded Projects – Nov 2023

****Martin is a NEMA Certified Environmental Practitioner [Certificate No.: CC/EIA/847/25]**

Membership in professional associations and publications:

Uganda Association for Impact Assessment (UAIA)
 National Association of Uganda Social Workers
 Uganda Evaluation Association

Employment Record Relevant to The Assignment:

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
Marc h 2025 to Marc h2028	<p>Employer: Ministry of Works & Transport</p> <p>Position: <u>Social Development Specialist</u></p> <p>Client: Environment & Social Department, Ministry of Works & Transport</p> <p>For References:</p> <p>Dr. Peter Bagwana</p> <p>Contracts Manager, Social Development</p> <p>Email: Phone: +256 772 447 393</p>		<p>Project A: Roads and Bridges Project in Refugee Hosting Districts of Koboko, Yumbe & Moyo districts (Funded by World Bank)</p> <p>Project Features: Provision of technical support to project teams in the effective management of social safeguards during road project implementation.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Supervise the Consultant/Resident Engineer in improvement of existing or new social management. • Provide technical support to the project to ensure all project processes are consistent with national & World Banks E&S policies. • Review contractor's periodic reports are inline with national & World Bank E&S policies & guidelines. • Oversee the development, update and implementation of stakeholder engagement plan. • Supervise implementation of activities by nominated service providers include HIV/AIDS, GBV/SEA, RAP and Livelihood Restoration Plan among others. • Organize joint inspection between contractor, consultant & MoWT and local government authorities. • Participate in supervision of works to ensure compliance with social safeguards policies and guidelines. • Prepare regular project updates and disseminate to key stakeholders. • Write and submit quarterly reports to contracts manager, social development.

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
July 2024 to date	<p>Employer: Team Initiatives Limited</p> <p>Position: <u>Resettlement Action Plan (RAP) Specialist</u></p> <p>For References:</p> <p>Mr. Brian Atuhairwe</p> <p>Co-Director – Team Initiatives Limited</p> <p>Email: brianatu@gmail.com</p> <p>Phone: +256 774 576 054</p>	Uganda	<p>Project B: Integrated Water Management and Development Project (IWMD) for Bitsya-Nyamugasani Water Supply and Sanitation projects. (Funded by World Bank)</p> <p>Project Features: Consultancy Services for Stakeholder Engagement, Environmental and Social Risk Management, Support in RAP Implementation and establishing a functional Grievance Redress Mechanism for beneficiary communities.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Lead implementation and reporting on RAPs' components. • Draw RAP implementation plans for 2 project sites. • Develop resettlement site selection criteria. • Support vulnerable to develop customized relocation plans. • Engage host sites for acceptability of resettled PAHs. • Disseminate housing typologies to resettled PAPs. • Recommend social infrastructure/services at new sites. • Lead in regularizing tenure security for PAHs. • Coordinate delivery of assistance for resettled PAPs/PAHs. • Coordinate for scheduled implementation of RAP activities. • Follow-up on relocation plans within vacation notice period. <p>Compile RAP progress reports for MWE/World Bank.</p>
Nov 2023 to date	<p>Employer: Private Sector Foundation Uganda</p> <p>Position: <u>Social Development Specialist</u></p> <p>For References:</p> <p>Mr. JohnMarie Kiwalabye</p> <p>Project Coordinator – CEDP - PSFU</p> <p>Email: johnmarie.kyewalabye@cedp.go.ug</p> <p>Phone: +256 772 447 393</p>	Uganda	<p>Project C: Supporting the Private Sector Foundation Uganda (PSFU) under the Competitive Enterprise Development Project (CEDP) & Investment for Transformation and Employment project (INVITE) (Funded by World Bank)</p> <p>Project Features: Supporting CEDP and INVITE projects to mainstream E&S screening and management, E&S compliance monitoring, strengthen implementation of ESMP provisions and mainstreaming stakeholder engagement and a functional GRM into projects' implementation cycle.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developing E&S screening tools and methodologies • Supervising construction sites to ensure compliance to the social conditions of approval in the NEMA Certificate. • Undertaking quarter E&S compliance monitoring of construction sites to ensure that they are in compliance with the relevant national and the World Bank EFS & ESSs. • Supervising and monitor the preparation and implementation of contractors ESMPs sub-management plans. • Supervising the formation of Workers and Communities Grievance Redress Mechanisms and building capacity of formed committees in grievance handling and management. • Operationalize the Workers' and Communities' GRCs through provision of logbooks and centralizing submission and referral of grievances and concerns to the World Banks and line MDAs.

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> • Reviewing social aspects of projects reports to ensure that social safeguards are well identified and addressed. • Dissemination of corrective measures to address social impact of infrastructure projects to host communities. • Participating in site meetings and providing technical guidance on E&S compliance issues. • Reviewing performance of supervising consultants to enforce E&S contractual requirements • Supporting INVITE – PFSU in preparation of ESMF and ES Screening tools.
Aug 2023 to Nov 2023	<p>Employer: GMT Consult LTD</p> <p>Position: <u>Social Development Expert</u></p> <p>Client: Kampala City Council Authority (KCCA)</p> <p>For References:</p> <p>Mr. Brayan Wamani Matovu Director – GMT Consults Ltd.</p> <p>Email: bwmatovu@gmail.com Phone: +256 701 108 262</p>	Uganda	<p>Project D: Consultancy Services for Independent Audit of RAP Implementation of the Second Kampala Institutional and Infrastructure Development Project (KIIDP II) (Funded by World Bank)</p> <p>Project Features: Undertaking an Independent Audit of Resettlement Action Plan (RAP) Implementation.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developing RAP audit methodology and tools • Developing detailed stakeholder engagement plan and led stakeholder engagements at different levels • Holding consultations with grievance management committees • Holding consultations with selected PAPs to assess extent of community consultations and active involvement of different social groups in RAP implementation • Undertaking consultations to determine extent the eligibility criteria was applied • Examining the impact of Community Development Action Plan by KCCA in restoring PAPs livelihoods. • Engaged vulnerable PAPs to examine adequacy of additional support targeting vulnerable PAPs • Assessing the efficiency of RAP studies/surveys including tools, methodologies and results in informing RAP preparation and implementation • Assessed institutional capacities for implementing agencies <p>Identifying implementation gaps and how they were mitigated.</p>
June 2023 to Feb 2024	<p>Employer: Urban Research & Training Consultancy Ltd</p> <p>Position: <u>Social Development Specialist</u></p> <p>Client: Ministry of Water & Environment (MWE)</p> <p>For References:</p> <p>Mr. Moses Oluka Team Leader – Urban Research & Training Consultancy</p> <p>Email: info@Urbanrtc.com Phone: +256 774 205 209</p>	Uganda	<p>Project E: Construction of Large Solar-Powered Piped Water Supply Systems and Sanitation Facilities in the Rural Growth Centres of Lomunga, Lobe, Awoba, Rodo, Nyori, Lobe, and Goboro in Yumbe District for Refugee Hosting Communities (Funded by World Bank)</p> <p>Project Features: Undertaking Environmental and Social Impact Assessments (ESIAs) Resettlement Action Plans (RAPs) and Source Protection Plans (SPP) for the 6 Rural Growth Centres (RGCs).</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Compiled the scoping report and ToR for the 6 Rural Growth Centres (RGCs). • Developed ESIA and RAP baseline survey methodologies and tools. • Supervised socioeconomic baseline surveys for RAP and ESIA in 6 Rural Growth Centres (RGCs) • Developed detailed stakeholder engagement plan including stakeholder analysis, mapping and engagement approaches. • Facilitated community consultations for ESIA & RAP in 6 RGCs. • Undertook social impact assessment for the project in

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<p>6 RGCs.</p> <ul style="list-style-type: none"> Developed the Social Management Plans (ESMPs) for 6 RGCs. Developed the project eligibility criteria for compensation. Developed the RAP compensation matrix for the 6 RGCs. Developed the project grievance resolution procedures by mainstreaming the Ministry of Water Grievance Redress Mechanism. Undertook vulnerability assessment to inform approaches for involvement of vulnerable PAPs in RAP processes for 6 RGCs. Developed strategies to minimize and mitigate impacts related to land acquisition and resettlement. Part of the team that wrote the ESIA and RAP reports.
May 2023 to Dec 2023	<p>Employer: KOM Consult Limited</p> <p>Position: <u>Social Development Specialist</u></p> <p>Client: Uganda National Roads Authority (UNRA) & Ministry of Works & Transport (MoTW)</p> <p>For References:</p> <p>Eng. Betty Nakamya</p> <p>Executive Director – KOM Consult Limited</p> <p>Email: bnakamya@komconsult.co.ug</p> <p>Phone: +256 772 468 356</p>	Uganda	<p>Project F: Upgrading of 6 Selected National Roads under Lot 2 i.e. Kamuli Kaliro Namwiwa-Saaka-Pallisa Road (89KM) (Funded by World Bank)</p> <p>Project Features: Feasibility studies, Detailed Engineering Design, Preparation of Bidding Documents for Implementation of Works, Environmental & Social Impact Assessment & ESMP and a Resettlement Action Plan and Livelihood Restoration Plan.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Compiled a comprehensive stakeholder engagement plan Preparation of periodic engagement summary reports. Developed socioeconomic survey methodology and automated tools. Supervised socioeconomic surveys and wrote the socioeconomic chapter of the RAP report. Developed the vulnerability assessment criteria to assess vulnerable PAPs and inform targeted resettlement options. Proposed resettlement options for vulnerable PAPs in-line with IFC guiding principle. Undertook data analysis of socioeconomic baseline survey. Undertook gender analysis and gender aggregated analysis and integrated gender equity issues in the RAP process. Developed the compensation/entitlement matrix. Developed grievance resolution guidelines, training tools for established grievance management committees. Deigned eligibility criteria for compensation awards. Developed less risky resettlement options for vulnerable PAPs guided by IFC OPs. Developed guidelines for relocation of graves/graveyards & cultural properties and guidelines for relocation sites. <p>Wrote the final RAP report and Livelihood Restoration Plan.</p>
Jan 2023 to Nov 2023	<p>Employer: Transport & Infrastructure Expertise Group (TIED)</p> <p>Position: <u>Social Specialist</u></p> <p>Client: European Union, Ministry of Energy & Mineral Development/Rural</p>	Uganda	<p>Project H: Last Mile Electrification Connectivity Support Project in 34 Districts for Grid and 11 Islands - Off Grid (Funded by European Union and AFD)</p> <p>Project Features: Prefeasibility Studies, Detailed Feasibility studies, Detailed Design of the Project, Preparation of Environmental and Social Management Frameworks, Resettlement Policy Framework, Gender Approach, Environmental and Social Impact Assessment,</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Electrification Programme (REP)</p> <p>For References:</p> <p>Mr. Kiiru Joseph</p> <p>Team Leader – TIEG</p> <p>Email: ikiiru@gammasys.co.ke</p> <p>Phone: +255</p>		<p>preparation of ESMP, preparation of Resettlement Action Plan, bidding documents for works procurement for national-grid & off-grid contractors.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Part of the team that wrote the project inception report • Developed a detailed stakeholder plan for all project phases • Developed tools to assess willingness and ability to pay for electricity services • Developed criteria for categorizing potential project beneficiaries into broad utility consumers • Developed tools to assess the energy needs of potential beneficiaries • Undertook social scoping to identify potential positive and negative project impacts • Developed a methodology for developing the project resettlement policy framework (RPF) • Developed a methodology for undertaking community sensitization meetings, RAP detailed socioeconomic surveys, livelihood restoration plans • Developed the project grievance redress management framework • Developed a methodology for undertaking the social impact assessment and designing appropriate mitigation measures.
Jan 2023 to Nov 2023	<p>Employer: GFA Consult</p> <p>Position: <u>Social Specialist</u></p> <p>Client: Ministry of Water and Environment (MME) – Water for Production Regional Office, Karamoja-Moroto Office</p> <p>For References:</p> <p>Mr. Edwin Wennink</p> <p>Team Leader – GFA Consult Limited</p> <p>Email: Phone: +256 756 384 843</p>	Uganda	<p>Project I: Drought Resilience Project in the Karamoja sub-region in selected clusters in Nangalopolon in Kotido district & Lemusui in Amudat district (Funded by KfW)</p> <p>Project Features: Construction Supervision of Water Storage Infrastructure i.e. earth dams & valley tanks, Improvement of Livestock Services, Adequate Operation & Maintenance of Water for production facilities & sustainable management of water catchment areas.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Designing a baseline survey including tools & methodology • Formulating project performance indicators • Developing and implementing a functional M&E system • Undertaking periodic monitoring of project activities during the construction phase • Developing the project quality control framework for contractors and sub-contractors • Developing project information and communication plan • Undertaking institutional assessment for Water for Production facilities within selected cluster sites • Support supervision of project contractors and sub-contractors • Capacity building and institutional development for Water for Production facilities within the selected clusters in Karamoja.
Jan 2023 to June 2023	<p>Employer: MSITU Consult Limited</p> <p>Position: <u>Sociologist</u></p> <p>Client: Ministry of Water and Environment (MME)</p> <p>For References:</p>	Uganda	<p>Project J: Civil Works for Construction of Flood Mitigation & Soil Erosion Control Structures/River Training Structures for Wadelai, Doho II and Ngenge Irrigation Schemes under FIEFOC II Project (Funded by AfDB & Nomadic Development Fund)</p> <p>Project Features: Updating Environmental and Social Impact Assessments (ESIAs) for 3 Doho II, Ngenge and Wadelai Irrigation Schemes for integration of Flood Mitigation and Soil Erosion Control Measures</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Mr. Richard Bavakule</p> <p>Executive Associate – MSITU Consult Limited</p> <p>Email: bavarichard@gmail.com</p> <p>Phone: +256 782 090677</p>		<p>Activities Performed:</p> <ul style="list-style-type: none"> • Mapped out stakeholders and developed detailed stakeholder engagement plans and approaches. • Led stakeholder consultations and public dissemination. • Compiled stakeholder/public engagement sections. • Developed socioeconomic survey methodology and survey tools. • Supervision of the socioeconomic surveys in the 3 schemes. • Wrote the socioeconomic sections of the 3 ESIA reports • Undertook environmental and social impact assessments • Wrote impact assessment sections for the 3 schemes. • Updated the mitigation measures for flood mitigation and soil erosion control works for the 3 schemes. • Updated the Environmental and Social Management Plans (ESMPs) for the 3 irrigation schemes. • Updated the 3 ESIA reports for Doho II, Ngenge, and Wadelai Irrigation Schemes.
August 2022 to August 2023	<p>Employer: Urban Research & Training Consultancy Ltd</p> <p>Position: <u>Sociologist</u></p> <p>Client: Ministry of Lands, Housing & Urban Development/ Uganda Support to Municipal Infrastructure Development Program (USMID)</p> <p>For References:</p> <p>Mr. Charles Koojo Amooti</p> <p>Executive Director – Urban Research & Training Consultancy</p> <p>Email: info@Urbanrtc.com</p> <p>Phone: +256 772 522 707</p>	Uganda	<p>Project K: Preparation of Physical Development Plans (PDPs) for Adjumani, Kiryandongo, and Lamwo Districts and Selected Urban Councils and Rural Growth Centres as Refugee Hosting Districts – Cluster C (Funded by World Bank under USMID)</p> <p>Project Features: Preparation of Physical Development Plans for districts, urban councils & sub-counties.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Mapped and identified stakeholders and developed a stakeholder inventory and stakeholder engagement plan • Developed the methodology and appropriate tools for socioeconomic surveys and stakeholder engagement. • Carried out a detailed situation analysis covering key areas such as land use, urbanization, settlements, service delivery. • Compiled stakeholder summary reports and integrated stakeholders’ views into planning proposals. • Wrote socioeconomic report informing proposals for land use, service delivery centres, infrastructure development etc. • Reviewed existing documents i.e. DDP and sub-county DDP to inform physical development planning process and proposal. • Developed the Communication & Information Plans and respective implementation guidelines. • Developed the relevant IEC materials • training of planning committees at town council and sub-county level in planning and implementation of PDP. • Developed an implementation plan and investment road map/funding priorities for respective districts.
September 2022 – to January 2023	<p>Employer: Geo-Taxon Consult Limited</p> <p>Position: <u>Social Specialist</u></p> <p>Client: Uganda Electricity Generation Company Limited/Sinohydro</p>	Uganda	<p>Project L: Environmental and Social Audit for Karuma 600MW Hydropower Dam’s Auxiliary Support Infrastructure Facilities (Funded by World Bank)</p> <p>Project Features: Environmental and Social Audit</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developing the environmental and social audit methodology and tools.

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>For References:</p> <p>Dr. Paul Ssegawa</p> <p>Director – Geo-Taxon Consult Limited</p> <p>Email: paulssegawa@yahoo.com</p> <p>Phone: +256 772 411 469</p>		<ul style="list-style-type: none"> • Developing the auditing tools for the different stakeholders. • Reviewing contractors and sub-contractors' records and reports to assess compliance of operations with national policies, standards and guidelines. • Reviewing baseline information on status of bio-physical and social environment including sensitive receptors. • Assessing the quality of post-restoration activities within RoW. • Conducting public consultations to assess compliance with social requirements including GBV, HIV/AIDS prevention, community engagement etc. • Reviewing the contractors' reports to assess compliance with the conditions in the NEMA certificate of approval. • Auditing the implementation on stakeholder engagement plan. • Developing action plans to address the identified non-conformities to set conditions in NEMA certificate. • Preparing the social compliance audit report.
October 2022 to November 2023	<p>Employer: Centre for Research & Sustainable Solutions</p> <p>Position: <u>Resettlement/RAP Specialist</u></p> <p>Client: Uganda Electricity Transmission Company Limited (UETCL)</p> <p>For References:</p> <p>Mr. Stephen Turyahikayo</p> <p>Executive Director – Centre for Research & Sustainable Solutions</p> <p>Email: turyahikayostephen@gmail.com</p> <p>Phone: +256 773 967 697</p>	Uganda	<p>Project M: Support for Sustainable Resettlement through Community Development, Livelihood Restoration, and Vulnerability Support for Gulu-Agago Power Line, Kole-Gulu-Nebbi-Arua Power Line, Mirama-Kabale Power Line & Masaka-Mbarara Power Line (Funded by KfW)</p> <p>Project Features: Implementation support and monitoring for Community Development, Livelihood Restoration and Vulnerability Support</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Facilitate inception meetings at district local governments. • Developing tools and methods for undertaking livelihood restoration surveys and community needs assessments. • Reviewing and updating RAPs for respective lines. • Work with local government leadership to update prior selected needs through priority resetting. • Proposing livelihood restoration programs for displaced vulnerable households informed by livelihood surveys. • Working with displaced vulnerable households to identify replacement land for housing and farming. • Monitoring contractors/sub-contractors to implement the RAP, livelihood restoration and community needs initiatives • Strengthen established village grievance committees. • Writing quarterly monitoring reports. • Writing the final completion report.
September 2022 – to Nov 2022	<p>Employer: Geo-Taxon Consult Limited/Consultrans SAU</p> <p>Position: <u>Social Specialist</u></p> <p>Client: Uganda Railway Cooperation (URC)</p> <p>For References:</p> <p>Dr. Paul Ssegawa</p> <p>Director – Geo-Taxon Consult</p>	Uganda	<p>Project N: Detailed designs of Kampala-Namanve, Tororo-Malaba Railway Section-28km, Preliminary Designs of Kampala Multi-Modal Hubs and Capacity Building Services (Funded by AfDB)</p> <p>Project Features: Preparation of Environmental & Social Impact Assessment (ESIA)</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Development of the ESIA methodology and tools for social assessment and socioeconomic baseline survey • Developed the detailed stakeholder engagement plan • Undertook stakeholder mapping and analysis

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Limited</p> <p>Email: paulssegawa@yahoo.com</p> <p>Phone: +256 772 411 469</p>		<ul style="list-style-type: none"> • Wrote stakeholder engagement reports and integrated their concerns into ESMP. • Wrote the socioeconomic chapter of the ESIA project. • Led the social impact assessments and wrote the social impact assessment section. • Wrote the social management plan as part of ESMP. • Part of the team that compiled the final ESIA.
August 2022 – to October 2022	<p>Employer: Pinnacle Integrated Resources (U) Limited</p> <p>Position: Social Safeguards Specialist</p> <p>Client: National Information Technology Authority (NITA)</p> <p>For References: Dr. John Kameri Ochoko Director – Pinnacle Integrated Resources (U) Ltd</p> <p>Email: info@pinnacleenviro.com</p> <p>Phone: +256 703 333 200</p>	Uganda	<p>Project O: The Last Mile Connectivity Project (LMCP) under the Regional Communication Infrastructure Project (RCIP) – NITA-U in the four regions of Uganda (Funded by World Bank)</p> <p>Project Features: Environmental & Social Audit</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed the environmental and social audit methodology and sampling strategy. • Developed the audit tools for the different stakeholders. • Reviewed contractors and sub-contractors' records and reports to assess compliance of operations with national policies, standards and guidelines. • Reviewed baseline information on status of bio-physical and social environment including sensitive receptors. • Assessed the quality of post-restoration activities within RoW. • Conducted public consultations to assess compliance with social requirements including GBV, HIV/AIDS prevention, community engagement etc. • Reviewed the contractors' reports to assess compliance with the conditions in the NEMA certificate of approval. • Audited the implementation on stakeholder engagement plan. • Developed action plans to address the identified non-conformities to set conditions in NEMA certificate. • Prepared the social compliance audit report.
Apr. 2022 – July 2022	<p>Employer: Queensland & Leeds</p> <p>Position: Social Assessment Expert</p> <p>Client: Mota-Engil Construction Company Uganda</p> <p>For References: Mr. Robert Lwanga Co-Director – Queens Land & Leeds Consulting Engineers</p> <p>Email: nrlwanga@gmail.com</p> <p>Phone: +256 754 955 157</p>	Uganda	<p>Project P: ESIA for the Proposed Concrete Batching Plant at Tilenga Oil and Gas Central Processing Facility (CPF) in Ngwedo sub-county, Buliisa District (Funded by TotalEnergies-Uganda)</p> <p>Project Features: Preparation of Environmental & Social Impact Assessment</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook stakeholder analysis and developing stakeholder engagement plan. • Consulted with the relevant stakeholders concerning the proposed batching plant. • Facilitated engagements with key stakeholders and wrote from Kasinyi village and wrote engagement reports. • Developed socioeconomic baseline survey methodology and tools. • Analyzed national and international safeguard frameworks relevant to the project. • Identified significant environmental and social impacts of the batching plant. • Analyzed the significance of positive and adverse impacts associated with the plant. • Recommended appropriate mitigation measures for identified negative impacts. • Identified cumulative impacts by the first batching plant and second batching plant. • Developed a contingency management plan for the

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> identified cumulative impacts. Developed the Environmental and social management Plan (ESMP). Developed of supplementary management plans including labour force management plan, health and safety management plan, public consultation/disclosure plan Developed of Mota-Engil environmental and social mitigation and monitoring plan. Undertook an environmental and social audit of the first batching plant against the conditions of NEMA certificate of approval. Wrote the final ESIA report.
Mar. 2022 – Jul. 2022	<p>Employer: PATROK Group Limited/WAPCOS</p> <p>Position: Sociologist</p> <p>Client: Ministry of Water and Environment</p> <p>For References:</p> <p>Eng. Robert Kagaba Director – PATROK Group Limited</p> <p>Email: patrokgroup@gmail.com</p> <p>Phone: +256 772 418 954</p>	Uganda	<p>Project Q: Feasibility Studies and Detailed Design of Medium and Large-Scale Irrigation Schemes in Central Uganda (Funded by World Bank under Agriculture Cluster Development Project)</p> <p>Project Features: Preparation of Feasibility Study Report</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Development of a detailed stakeholder engagement analysis and plan. Undertook reconnaissance visit to upstream and downstream communities to identify issues relevant to the project and introduce the project to key stakeholders. Stakeholder consultations at national, district and community level. Compiled stakeholder engagement summary reports to feed into main report. Development of household survey methodology and tools and training enumerators on application of survey tools using Kobo application. Reviewed district development plans, national & international policies/frameworks. Profiled socioeconomic characteristics to inform project planning and monitoring. Assessed existing crop varieties and cropping systems to be adopted by schemes. Assessed ownership of farm infrastructure and constraints to farm productivity. Examined access to potential markets, input and output dealers, market operators, linkages to output markets and credit financing for out-growers. Identified livelihood constrains to be potential addressed by the proposed schemes. Identified vulnerable groups and strategies to promote their participation in the project. Made institutional assessment for existing farmer-based management organizations. Assessed willingness of beneficiary communities to participate in the project. Developed mitigation for impacts associated with land acquisition for construction of proposed irrigation scheme infrastructure. Determined current and future water demands for domestic and production purposes. Reviewed existing land tenure/ownership system and impact on project development. Assessed HIV/AIDS situation and potential of the project to exacerbate the situation.
Nov. Oct 2021	<p>Employer: Queensland & Leeds Consulting Engineers</p>	Uganda	<p>Project R: Closure of Kiteezi Landfill for Kampala City Council Authority (World Bank/IFC)</p> <p>Project Features: Environmental & Social Impact</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
– Feb. 2022	<p>Position: <u>Social Assessment & Livelihood Restoration Expert</u></p> <p>Client: Kampala City Council Authority/City Infrastructure Growth (CIG) &</p> <p>For References:</p> <p>Mr. Robert Lwanga Co-Director – Queens Land & Leeds Consulting Engineers</p> <p>Email: nrlwanga@gmail.com</p> <p>Phone: +256 754 955 157</p>		<p>Assessment (ESIA) and Livelihood Restoration Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Development of a stakeholder analysis, engagement and public consultation plan. • Drafting the scoping and inception report • Review of national and international policy and legal frameworks relevant to the closure of Kiteezi landfill. • Development of socioeconomic household baseline survey for waste pickers and Kiteezi landfill neighborhood homes. • Trained and supervised of data collection using CTO-survey collect online platform. • Assessed the socioeconomic impacts of the proposed Ddundu Waste treatment & disposal facility. • Undertook environmental and social impact assessment for closure of the landfill. • Evaluated the significance, magnitude and severity of the adverse impacts during the pre-closure and post-closure phases of the landfill. • Assessed capacity of institutions such as KCCA and neighboring municipalities responsible for post closure-phase management of Kiteezi landfill. • Developed mitigation measures for adverse impacts and opportunities for enhancing positive impacts for post-closure period and when Kiteezi is made a transfer station. • Development of the environmental and social management and monitoring plan. • Wrote the final social assessment report as deliverable II. • Undertook a livelihood restoration survey among landfill waster pickers & sorters, traders, recyclers. • Wrote the livelihood restoration plan for integration of waste pickers and sorter during post-closure phase. • Developed the livelihood restoration plan, implementation plan and a LRP budget for integration of waste pickers and sorters during post-closure phase. • Developed a framework for monitoring and evaluation of implementation of LRP.
Oct. 2021 – Feb. 2022	<p>Employer: KOM Consult Limited</p> <p>Position: <u>RAP Specialist</u></p> <p>Client: Uganda National Roads Authority (UNRA)</p> <p>For References:</p> <p>Eng. Betty Nakamya Co-Director – KOM Consult Limited</p> <p>Email: b.nakamya@komconsult.co.ug</p> <p>Phone: +256 772 842 934</p>	Uganda	<p>Project S: Construction of the Kumi, Ngora, Serere Kagwala Highway Road Project (95km) (Funded by AfDB)</p> <p>Project Features: Preparation of Resettlement Action Plan - RAP</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Led introductory meetings with local authorities to introduce the project. • Development of detailed stakeholder engagement plans • Preparation of periodic engagement summary reports. • Developed socioeconomic survey methodology and automated tools. • Developed business and livelihood surveys' method & tools • Supervised socioeconomic surveys/business and livelihood restoration surveys. • Developed the vulnerability assessment criteria to assess vulnerable PAPs and inform targeted resettlement options. • Proposed resettlement and livelihood restoration options for vulnerable PAPs in-line with IFC guiding principle. • Undertook data analysis of socioeconomic and

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<p>livelihood restoration surveys.</p> <ul style="list-style-type: none"> • Led the cultural assessment and mapping exercises using the chance find guidelines of IFC. • Undertook gender analysis and gender aggregated analysis and integrated gender equity issues in the RAP process. • Designed strategies to minimize impacts of the road • Developed the compensation/entitlement matrix. • Developed grievance resolution guidelines, training tools for established grievance management committees. • Developed eligibility guidelines and criteria for compensation awards. • Proposed less risky resettlement options for vulnerable PAPs guided by IFC OPs. • Developed guidelines for relocation of graves/graveyards & cultural properties and guidelines for relocation sites. • Developed M&E framework for implementation of RAP & Livelihood Restoration Plan. • Wrote the final RAP report and Livelihood Restoration Plan.
August/2021 - Dec/2021	<p>Employer: Bright Technical Services/JENAK Investments Limited</p> <p>Position: <u>Sociologist</u></p> <p>Client: Ministry of Water & Environment (Water & Sanitation Development Facility, South West/WSDF-SW)</p> <p>For References:</p> <p>Mrs. Esther Nanssonko Social Development Specialist, JENAK Investments limited/Bright Technical Services</p> <p>Email: sonkavuma@gmail.com</p> <p>Phone: +256 772 426 834</p>	Uganda	<p>Project T: “Feasibility study and detailed design for Bulk Water Transfer for Multi-purpose Use in Rubanda & Kisoro districts and the neighboring areas” (Funded by Government of Uganda through Ministry of Water & Environment)</p> <p>Project Features: Feasibility Study</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed sampling designs/determined sample size. • Developed quantitative and qualitative methods & tools • Developed the socioeconomic survey analytical grid • Designed detailed stakeholder engagement plan • Made population projections to determine future water demands of beneficiary communities. • Established the water supply status of the project area. • Projected unit consumption rate for household, commercial and institutional uses. • Assessed current water use i.e. crop and livestock production, industrial, commercial and institutional use. • Established the status of existing public sanitation facilities and hygiene practices of project area. • Assessed ability and willingness of households to pay for improved water and sanitation services. • Assessed the willingness to participate in project implementation • Estimated domestic/institutional water demand. • Writing the socioeconomic assessment report.
June/2021 to-date	<p>Employer: Governance Systems International (GSI)</p> <p>Position: <u>Institutional Development Expert</u></p> <p>Client: Water for Production, Karamoja Region, Ministry of Water and Environment</p> <p>For References:</p> <p>Mr. Tom Kyakwise</p>	Uganda	<p>Project U: Establishment of Management Systems for Water for Production Facilities in Karamoja sub-region (Funded by Government of Uganda)</p> <p>Project Features: Institutionalization of Sustainable management Structures of Water for Production facilities)</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook a field survey to assess performance of WUAs for water for production facilities in Karamoja sub-region. • Undertook field visits to assess, how social issues are

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>CEO – Governance Systems International (GSI)</p> <p>Email: governancesystems@hotmail.com</p> <p>Phone: +256 757 578 580</p>		<p>addressed.</p> <ul style="list-style-type: none"> • Undertook a situational analysis for O&M practices for water for production facilities in Karamoja sub-region. • Developed specific management models for the 5 pilot water facilities in Moroto, Napak, Amudat, Abim and Kaboong districts. • Undertook public consultation and awareness raising on the proposed management models for water facilities. • Rejuvenated the existing water user management committees through developing guidelines for electing new executive committees. • Supervised the electoral process for election of new 5 executive committees. • Developed training materials for building capacity of established water user executive committees including manuals on Operation & Maintenance, good leadership, community mobilization, gender, HIV/AIDS, record keeping, determining water user fees, participatory M&E. • Facilitated the participatory formulation of bylaws for the 5 pilot water facilities and facilitated their adoption. • Facilitated participatory formulation of MOU between the 5 districts, sub-counties and water user associations. • Facilitated registration of the established water user committees/associations at district and sub-county. • Mainstreamed gender in the management of facilities through having women and youth on executive committees.
<p>Sept 2021 – Nov 2021</p>	<p>Employer: Queens Land & Leeds Consulting Engineers</p> <p>Position: <u>RAP Specialist</u></p> <p>Client: Mota Engil Construction Company</p> <p>For References:</p> <p>Mr. Robert Lwanga Co-Director – Queens Land & Leeds Consulting Engineers</p> <p>Email: nrlwanga@gmail.com</p> <p>Phone: +256 754 955 157</p>	<p>Uganda</p>	<p>Project V: Proposed Quarry Site in Komuriakere in Kongunga Town Council – Bukedea District (UNRA)</p> <p>Project Features: Resettlement Action Plan/Livelihood Restoration Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Facilitated a reconnaissance visit to Kongunga town council to introduce the project to the urban authority on behalf of Mota-Engil and UNRA as leading Agency. • Designed detailed stakeholder engagement plans and led community engagements. • Wrote weekly stakeholder engagement reports that fed into stakeholder engagement section of the RAP report. • Developed socioeconomic survey and livelihood restoration survey methodology and data collection tools. • Trained enumerators for the collection of survey data using a structured automated questionnaire using CTO-collect. • Analyzed socioeconomic survey data and wrote the socioeconomic section. • Developed a vulnerability assessment criteria for identification and assessment vulnerable PAPs. • Developed modalities for informing choice of less risky resettlement options for vulnerable groups. • Developed suitable livelihood restoration assistance for vulnerable PAPs including modalities of distributing transitional allowance during temporary relocation. • Undertook an institutional assessment to assess organizational capacity for Kongunga town council in the implementation of temporary relocation and

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<p>delivery of livelihood restoration activities.</p> <ul style="list-style-type: none"> Developed the grievance handling procedures and IEC materials for training grievance formed committees. Worked with Kongunga TC and Komuriakere village leaders to established village grievance management committees at parish/ward and cell/village level. Developed the M&E framework for the implementation of temporary relocation. Wrote the final RAP report and livelihood restoration plan.
April 2021 – Aug. 2021	<p>Employer: Geo-Taxon Consult Limited</p> <p>Position: <u>RAP Specialist/Livelihood Restoration Specialist</u></p> <p>Client: Uganda Railway Cooperation (URC)</p> <p>For References:</p> <p>Dr. Paul Ssegawa Director – Geo-Taxon Consult Limited</p> <p>Email: paulssegawa@yahoo.com</p> <p>Phone: +256 772 411 469</p>	Uganda	<p>Project W: Revamping of Uganda Railway Cooperation Line Network from Malaba to Kampala to Nalukolongo (Funded by African Development Bank)</p> <p>Project Features: Resettlement Action Plan & Livelihood Restoration Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Led reconnaissance visit and wrote the inception report. Drafted socioeconomic and livelihood restoration survey methodology and tools, business and institutional tools. Developed a vulnerability assessment criteria. Supervised socioeconomic, vulnerability and cultural surveys. Mapped affected businesses along the railway line. Developed the comprehensive stakeholder plan and wrote stakeholder engagement reports. Developing a vulnerability inventory that informed designing of targeted assistance to vulnerable groups. Developing the compensation matrix Designed resettlement options for different groups Developed livelihood restoration programmes for the different categories of PAPs from project districts. Drafted procedures for the establishment of grievance management committees at village and cell level. Developed schedules for RAP and Livelihood Restoration Plan Implementation. Wrote the final RAP and Livelihood Restoration Plans.
April 2021	<p>Employer: Queens Land & Leeds Consulting Engineers</p> <p>Position: <u>RAP Specialist</u></p> <p>Client: Polat Yol Yapi Construction Company</p> <p>For References:</p> <p>For References:</p> <p>Mr. Robert Lwanga Co-Director – Queens Land & Leeds Consulting Engineers</p> <p>Email: nrlwanga@gmail.com</p> <p>Phone: +256 754 955 157</p>	Uganda	<p>Project X: Resettlement Action Plan (RAR) for Nasak Quarry in Chepsukunya Town Council – Kween District (Uganda National Roads Authority/Government of Uganda)</p> <p>Project Features: Resettlement Action Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Conducted a reconnaissance visit to Chepsukunya town council to introduce the project on behalf of Polat Yol Yapi Construction Company as the contractor. Developed stakeholder engagement plans, facilitated engagements and wrote engagement reports. Developed socioeconomic survey and livelihood restoration methods and tools. Trained enumerators to collect data with the structured questionnaire automated on tablets/smart phones. Analyzed socioeconomic survey data and wrote the socioeconomic section. Developed a vulnerability assessment framework that guided the process of identifying vulnerable PAPs. Designed modalities for informing choice of resettlement pack-age for vulnerable groups and suitable livelihood restoration and transitional

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<p>support.</p> <ul style="list-style-type: none"> • Undertook an institutional assessment to assess organizational capacity of Chepsukunya in the implementation of temporary relocation and implementation of livelihood restoration support. • Established and trained grievance management committees at ward and cell. • Developed grievance resolution procedures for GMCs. • Developed an electronic grievance log and issues tracker/database. • Developed the M&E framework for the implementation of temporary relocation. • Wrote the final RAP report and livelihood restoration plan.
Feb. 2021 – Jul. 2021	<p>Employer: COWI Uganda Limited</p> <p>Position: <u>Social Specialist</u></p> <p>Client: Kampala City Council Authority (KCCA) & City Infrastructure Growth (CIG)</p> <p>For References:</p> <p>Eng. Grace Mukunzi Luwemba</p> <p>Email: gmlu@cowi.com</p> <p>Phone: +256 775 290 691</p>	Uganda	<p>Project Y: Ddundu Waste Treatment and Disposal Facility for Kampala City and the Great Metropolitan Kampala (Funded by World Bank/IFC)</p> <p>Project Features: Preparation of Environmental and Social Impact Assessment (ESIA) Abbreviated Re-settlement Action Plan (RAP)</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Stakeholder identification and mapping and developed a stakeholder inventory. • Development of a detailed stakeholder engagement and public consultation plan. • Drafted the inception report. • Reviewed policy and legal frameworks and gap analysis against IFC performance standards. • Development of socioeconomic baseline survey including methodology and house-hold survey questionnaire. • Development of the project description including associated facilities. • Assessing the socioeconomic impacts of the proposed Ddundu Waste treatment & disposal facility • Developing of appropriate mitigation measures to address identified social risks. • Drafting of a comprehensive environmental and social management plan (ESMP) with action plans. • Assessed impact of the project on water sources used by affected communities and developed mitigation measures. • Identified flood hazards areas and impact on community health and safety and crop farming and proposed mitigation measures. • Assessed the impact of the project on traffic and community roads and proposed mitigation measures. • Made analysis of project alternatives through review of options of sites for selection
August 2020	<p>Employer: GOPA International Energy Consultants (Intec)</p> <p>Position: <u>RAP Specialist – Construction Supervision</u></p> <p>Client: Rural Electrification Agency (REA)</p> <p>For References:</p> <p>Eng. Melville Fish</p> <p>Project Manager: GOPA – International Energy Consultants (Intec)</p>	Uganda	<p>Project Z: Energy for Rural Electrification (ERT III) Uganda Phase I (Funded by World Bank)</p> <p>Project Features: Preparation of Resettlement Action Plan, Engineering Designs, Preparation of Bidding Documents, Tendering Support and Construction Supervision for Energy for Rural Transformation Phase Three – ERT III (Uganda) Phase II funded by the World Bank for Line 20: -Ngeta – Ayala – Alito – Ogur – Aloï – Adwari–Patongo 33 Kv Distribution power line and associated low volt-age networks & Line 21: Dokolo – Agwata HCIII, Aceng - Dokolo – Atru, Dokolo – Apapai – Tiriri & Otuboi.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed stakeholder engagement plans with clear

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Email: Melville.Fish@gopa-intec.de Phone: +256 783 738 530</p>		<p>timelines and engagement approaches.</p> <ul style="list-style-type: none"> • Worked with local councils at respective sub-counties to identify and verify PAPs compensation and payment information. • Identified vulnerable groups for targeted assistance and equitable deliverable of compensation. • Prepared the entitlement matrix and implementation schedules for respective lines. • Designed modalities for delivery of equitable compensation to displaced persons for temporary land acquisition during construction. • Facilitated processes of display of strip maps and project affected persons at respective sub-counties. • Worked with REA teams to disclose the RAP reports and CGV approved valuation rates at sub-county level. • Worked with REA Way-leaves team to supervise land expropriation for Transformer Sites. • Developed joint timetables with REA for rolling out compensation payments. • Established Committee Grievance Committees and trained them on grievance resolution procedures. • Updating the grievance register/log • Supervised the implementation of livelihood restoration programmes. • Trained contractor's staff and other district stakeholders on the Safeguards requirements for ERT III. • Routine supervision of construction works to ensure compliance with social and environmental safeguards. • Participated in site meetings and provided technical guidance on social and environmental safeguards. • Prepared regular social and environmental safeguards reports for submission to the Bank. • Enforced contractual requirements to ensure that the agreed safeguards and risk mitigation measures are implemented before certificates are issued. • Wrote Intec monthly and quarterly compensation status and progress.
<p>July 2020 – Dec. 2020</p>	<p>Employer: IPE – Global & Governance Systems International (GSI)</p> <p>Position: <u>Social and Gender Inclusion Expert</u></p> <p>Client: UNICEF/Ministry of Water and Environment</p> <p>For References:</p> <p>Mr. Tom Kyakwise CEO – Governance Systems International (GSI)</p> <p>Email: governancesystems@hotmail.com</p> <p>Phone: +256 757 578 580</p>	<p>Uganda</p>	<p>Project AA: Strategies to Address Water Supply Inequities in Uganda (Funded by UNICEF & Ministry of Water & Environment)</p> <p>Project Features: Comprehensive Assessment of the Causes of Water Supply Inequity in Uganda and Identification of Strategies to Address them.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Designed methodological approach integrating geographical, social and economic disparities into the sampling criteria. • Undertook stakeholder mapping, consultations at national and district and refugee hosting communities in West Nile. • Assessed the functionality of existing water user committees for integration of social issues in O&M of water facilities. • Assessed the functionality of hand pumps, point water sources and motorized systems and sanitation facilities. • Assessed community attitudes and behaviors towards sanitation and hygiene.

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			<ul style="list-style-type: none"> Assessed factors for water supply inequity between urban and rural areas, refugee settlements and host communities. Examined the functionality of hand pumps mechanics associations for host and refugee settlements. Examined level of integration of environmental/social issues into WASH projects for sustainability of water systems. Assessed the operationalization of O&M manuals and plans for water and sanitation committees in host/refugee areas. Examined effectiveness of M&E systems at national and district level to track progress of WASH.
Feb. 2020 – Jun. 2021	<p>Employer: Infrastructure Development & Management Ltd.</p> <p>Position: <u>Supervising Sociologist</u></p> <p>Client: Jinja Municipal Council/Ministry of Lands, Housing & Urban Development</p> <p>For References:</p> <p>Eng. Ronald Menya</p> <p>CEO- Infrastructure Development and Management</p> <p>Email: ronaldmenya2016@gmail.com</p> <p>Phone: +256 772 407 822</p>	Uganda	<p>Project BB: Uganda Support to Municipality Infrastructure Development-USMID-AF (Funded by World Bank)</p> <p>Project Features: Consultancy Services for the Design Review and Construction Supervision of Rehabilitation of Busoga Road and Main Street Road and Completion of Rehabilitation of Eng. Zikusooka Road for Jinja Municipal Council.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Supervised the preparation of social and environmental safeguards. Supported Stirling Civil Engineering Limited to implement social safeguards through enforcing compliance to national laws and policies. Supported and supervised the development of Stirling Environmental & Social Management Plans (ESMPs) for managing social risks including HIV/AIDS, labour influx, child protection and gender based violence & violence against children. Supervised implementation of land acquisition, resettlement and compensation esp. along Eng. Zikusooka Road for informal businesses and settlements. Guided the development and delivery of livelihood restoration support especially to vulnerable PAPs/groups. Supervised the implementation grievance management plan including establishing grievance committees and training them on effective grievance resolution Acted as a link between the Stirling project staff, Jinja Municipal Council and the Bank. Supervised development of livelihood restoration programmes for especially for the informal sector. Facilitated stakeholders' engagements and community sensitization meetings. Collaborated with Jinja Municipal to ensure that Stirling's workers' rights and welfare are protected. Developed measures to safeguard against violence against children including prohibiting child labour. Participating in site meetings and provided technical guidance on safeguards compliance.
Sept. 2019 –	<p>Employer: Governance Systems International (GSI)</p>	Uganda	<p>Project CC: Farm Income Enhancement and Forestry Conservation Project (FIEFOP II) for Doho II Irrigation Scheme (Funded by African Development Bank)</p>

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Sept. 2022	<p>Position: <u>Social Development Expert</u></p> <p>Client: Ministry of Water and Environment</p> <p>For References:</p> <p>Mr. Tom Kyakwise CEO – Governance Systems International (GSI)</p> <p>Email: governancesystems@hotmail.com</p> <p>Phone: +256 757 578 580</p>		<p>Project Features: Implementation Support to Sustainable Farmer Based Institutional Management of Doho II Irrigation Scheme</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Conducted surveys on production, value chain and marketing to inform commercial agricultural programming. • Led resettlement action planning, land acquisition and compensation processes for Doho II construction works. • Drafted grievance resolution procedures and set up setting up grievance handling committees at block level. • Prepared quarterly stakeholder engagement plans with key actors and wrote monthly engagement reports. • Supported farmers to form governance structures including the Farmer Field Schools at farm level, Irrigation Water User Committees at block & Water User Association at scheme level. • Supported and trained farmers on the formation of Doho II irrigation Scheme Produce Cooperative. • Supported farmers and water users to register the Farmer Field Schools and Irrigation Water User Committees at Block at the sub-county and registration of Doho II IWUA and the Producer Cooperative at Butaleja district. • Developed IEC materials on irrigated water management/water scheduling, community mobilization, grievance resolution, group dynamics, gender and social inclusion, HIV/AIDS, GBV, value chain and marketing. • Developed operational procedures for Water User Committees & Irrigation Water User Association (IWUA) including water scheduling matrixes for the 24 blocks. • Mobilized farmers for regular payment of water user fees for sustainable operation and maintenance of the scheme. • Developed gender & HIV/AIDS mainstreaming manual to facilitate gender related trainings among farmers. • Trained farmers on drafting bylaws & groups' constitution, tenancy agreement, land use agreement, water service agreement. • Developed mobilization strategies to guide farmers on routine participation in agronomic, agri-business, value chain and financial literacy trainings. • Developed M&E framework including performance indicators, M&E data collection methods & tools and reporting templates.
Jan. 2019	<p>Employer: RESCO Property Survey Consultants</p> <p>Position: <u>RAP Sociologist</u></p> <p>Client: Rural Electrification Agency (REA)</p> <p>For References:</p> <p>For References:</p> <p>Mr. Solomon Balinda</p>	Uganda	<p>Project DD: <u>Resettlement Action Plan (RAP) Update for the proposed Construction of Rural Electrification Project in West-Nile (Wandi – Yumbe –Moyo – Onduparaka – Odramachaku -Biria) under ERT II (Funded by World Bank)</u></p> <p>Project Features: Resettlement Action Plan Update</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook the reconnaissance visit and wrote the project inception report that in-formed the subsequent phases. • Undertook analysis of national legislations and international best practices to identify gaps and propose measures to fill identified gaps.

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	<p>email: rescoprosc@gmail.com</p> <p>Phone: +256 772 628 545</p>		<ul style="list-style-type: none"> • Participated in developing socioeconomic survey methodologies and household questionnaires and FGD guide. • Trained and provided support supervision of enumerators during data collection. • Developed analytical grid for the quantitative socioeconomic survey and integrated the findings into the main RAP report. • Developed comprehensive stakeholder plans, analysis and inventory. • Conducted community sensitization meetings and public consultations. • Drafted consultation and summary stakeholder engagement reports. • Designed the compensation matrix to inform the compensation process. • Developed vulnerability criteria that informed the identification of vulnerable PAPs. • Developed RAP implementation schedules and an institutional framework for RAP implementation. • Developed grievance procedures and tracker to track status of reported grievances. • Developed the monitoring and evaluation framework including M&E indicators. • Part of a team that wrote the final RAP updated report.
<p>Oct. 2018 – Nov. 2019</p>	<p>Employer: Total E&P - Uganda</p> <p>Position: <u>Sociologist/Deputy Land Acquisition Manager</u></p> <p>Client: Total E&P - Uganda</p> <p>For References:</p> <p>For references: Mrs Benoit Guilbert - Land Acquisition Manager – Total E&P Uganda for (EACOP)</p> <p>Email:benoit.guilbert@external.total.com</p> <p>Phone: +256 794 888 032</p>	<p>Uganda</p>	<p>Project EE: Social and Resettlement Action Planning for the East African Crude Oil Pipeline (EACOP) in the 10 districts (Funded by TotalEnergies- Uganda)</p> <p>Project Features: Social and Resettlement Action Planning, Land Acquisition & Livelihood Restoration</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Supervised drafting of EACOP Resettlement Action Plan (RAP) by contractor. • Peer-reviewed different sections of the draft EACOP RAP submitted by contractor. • Designed stakeholder engagement plans & approaches and wrote summary reports. • Established working with the 10 EACOP district through information workshops on RAP activities and Land Acquisition processes. • Supervised socio-economic survey, wetland demarcation and forest demarcation survey & utilities survey. • Supervised the disclosure and verification process for valuation reports, strip maps and Cut-off dates. • Developed the EACOP Compensation Payment tracker and payment dossier. • Developed EACOP grievance tracker for tracking land acquisition and compensation related grievances. • Developed guidelines for supporting vulnerable PAPs to open bank accounts at community level. • Prepared draft EACOP compensation agreements and consent letters. • Held information workshops with Members of Parliament for 10 EACOP districts and with Buganda Kingdom & Kooki Chiefdom to discuss progress of RAP activities. • Facilitated capacity building workshops for Media & NGOs on EACOP RAP process. • Held frequent radio talk-shows to discuss progress of EACOP RAP, land acquisition, compensation status. • Frequently worked with the Land Acquisition Team & Communication Dep't to update the EACOP Land Acquisition Frequently Asked Questions Handbook.

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			<ul style="list-style-type: none"> • Prepared the Midstream land acquisition weekly reports for the EACOP Land Manager. • Supervised the process of title searches, initial legal land transfers and application of letters of administration with the Contractor. • Developed EACOP guidelines for invisible graves and grave relocation as adopted from the Guidelines for Compensation Assessment under Land Acquisition by CGV.
Oct. 2018 – Dec. 2018	<p>Employer: CGP Consulting Engineers</p> <p>Position: <u>Sociologist</u></p> <p>Client: Uganda Electricity Transmission Company Limited - UETCL</p> <p>For References:</p> <p>Mr. Maina Githinji</p> <p>Email: githinjime@gmail.com</p> <p>Phone: +254 724 527 506</p>	Uganda	<p>Project FF: Environmental and Social Audit for the Kawanda – Masaka Transmission Line and the Associated substations (Funded by African Development Bank)</p> <p>Project Features: Completion Social and Environmental Audit</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed stakeholder engagement plans and wrote daily engagement reports. • Developed socioeconomic methodology and tools and supervising socioeconomic survey data collection. • Developed qualitative and quantitative analytical grid for socioeconomic survey. • Undertook impact assessment among different vulnerable groups that benefited from targeted assistance. • Assessed adequacy of compensation packages and livelihood restoration plans • Led public consultations and wrote summary consultation reports. • Assessed resettlement assistance targeting vulnerable groups. • Assessed project impact on physical cultural properties and their restoration. • Assessed the functionality of established grievance redress mechanisms/grievance management committees. • Prepared the final social completion audit report with relevant recommendation for RAP implementation and future programming.
May 2018 – Aug. 2018	<p>Employer: Uganda National Roads Authority</p> <p>Position: <u>Sociologist</u></p> <p>Client: Uganda National Roads Authority (UNRA)</p> <p>For References:</p> <p>For references: Mr. Edward Jjuuko, Social Development Specialist - UNRA</p> <p>Email: ejjuuko@gmail.com;</p> <p>Phone: +256 772 952 532</p>	Uganda	<p>Project HH: Busega – Mpigi Express Highway Road Project Resettlement Action Plan Update and Implementation (Funded by African Development Bank)</p> <p>Project Features: Resettlement Action Plan Update and Implementation</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed stakeholder engagement plans and prepared periodic engagement analytical reports. • Led socioeconomic surveys through designing tools, methodologies and training enumerators. • Developed the vulnerability assessment criteria which guided profiling vulnerable groups and targeted resettlement assistance. • Proposed resettlement and livelihood restoration options for vulnerable groups in-line with the IFC principles. • Undertook detailed analysis of the socioeconomic survey data to inform the writing the socioeconomic report. • Undertook the Chance Find Policy under the OP 4.11 Physical Cultural Resources and developing an inventory of affected cultural properties. • Participated in verification and disclosure in Mpigi TC,

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			<p>Kiringente S/C, Wakiso S/C and Nsangi TC.</p> <ul style="list-style-type: none"> • Led public sensitization meetings for enlightening PAPs on key requirements for eligibility for compensation. • Proposed less risky resettlement options for vulnerable PAPs guided by IFC OPs.. • Worked with PAPs to select Grievance Management Committees in all the affected villages. • Developed training tools and trained grievance management committees in managing grievances. • Led the process of assessing and identifying vulnerable PAPs to inform designing of targeted livelihood support.
Mar. 2017 – Jul. 2017	<p>Employer: Uganda National Roads Authority (UNRA)</p> <p>Position: Sociologist</p> <p>Client: Uganda National Roads Authority (UNRA)</p> <p>For References:</p> <p>For references: Mr. Edward Jjuuko, Social Development Specialist - UNRA Email: ejjuuko@gmail.com; Phone: +256 772 952 532</p>	Uganda	<p>Project II: Critical Oil Road Project Lot 7-8: Masindi-Kasanja/Park Junction; Buliisa-Paraa; Sambiya-Murchison Falls; Wanseko-Bugungu Road (169km) (Funded by EXIM Bank)</p> <p>Project Features: Preparation of Resettlement Action Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Participated in reconnaissance visits to Masindi and Buliisa districts and wrote the reconnaissance report. • Developed the stakeholder engagement plans writing the engagement reports. • Undertook socioeconomic survey and analysis and used the survey results to identify vulnerable PAPs and inform livelihood restoration activities. • Assessed and integrated social issues into the RAP implementation process including encouraging women to witness compensation and promoted joint accounts. • Undertook institutional assessment that mapped the key institutions in RAP implementation. • Developed vulnerability assessment criteria that informed identification of vulnerable PAPs and proposing less risky resettlement options for vulnerable groups. • Developed the compensation matrix and resettlement assistance framework that guided the compensation process and delivery of resettlement assistance. • Participated in developing grievance handling procedures for the project. • Mainstreamed gender through promoting spousal consent and joint account opening. • Developing RAP implementation M&E framework including M&E indicators, methodologies and tools. • Part of the technical team that wrote the final RAP report.
Oct. 2016 – Mar. 2017	<p>Employer: Resco Property Consultant Surveyors</p> <p>Position: Sociologist</p> <p>Client: Rural Electrification Agency</p> <p>For References:</p> <p>Mr. Balinda Solomon</p> <p>email: rescoprosc@gmail.com</p> <p>Phone: +256 772 628 545</p>	Uganda	<p>Project JJ: Development of Abbreviated Resettlement Action Plan(A RAP) for 33KV Grid-Extension & LV Reticulations for Fast Track Lot 10 North – North West Services Territory Gulu-Olwiyo-Pakuba Power Line Projects (Funded by World Bank)</p> <p>Project Features: Resettlement Action Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook analysis of national and international legal and policy frameworks for ensuring compliance. • Designed the socioeconomic survey tools, methodologies and analytical framework. • Supervised data collection for the socioeconomic survey • Developed livelihood restoration strategies. • Designed the compensation matrix and resettlement assistance framework.

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> • Led and facilitated stakeholder engagements and wrote weekly engagement reports. • Developed vulnerability assessment criteria for identification of vulnerable PAPs. • Developed the RAP and livelihood restoration implementation schedule. • Developed the resettlement assistance framework and compensation matrix. • Facilitated sensitization meetings of affected communities prior to verification and disclosure of approved valuation report by CGV. • Developed grievance redress procedures that informed the establishment of villages grievance committees. • Developed M&E performance indicators, M&E data collection tools & methods and reporting templates. • Wrote the final the RAP report.
Sept. 2016 – Dec. 2016	<p>Employer: Resco Property Consultant Surveyors</p> <p>Position: <u>Senior Sociologist</u></p> <p>Client: Uganda National Roads Authority (UNRA)</p> <p>For References:</p> <p>Mr. Balinda Solomon</p> <p>email: rescoprosc@gmail.com</p> <p>Phone: +256 772 628 545</p>	Uganda	<p>Project KK: Development of the Resettlement Action Plan for the Mabiira Stone Quarry project in Kyenjojo district (Funded by Uganda National Roads Authority/Government of Uganda)</p> <p>Project Features: Resettlement Action Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Facilitated community sensitization meetings in Mabiira project village • Developed stakeholders engagement plans and wrote weekly summary reports. • Integrated gender and equity issues into RAP planning and implementation. • Led the socioeconomic surveys through developing methodology and tools and analyzed survey data • Undertook detailed vulnerability assessment to inform targeted resettlement assistance for vulnerable groups • Undertook institution assessment that mapped and assessed capacity of the RAP implementation actors. • Developed an inventory of affected cultural properties to guide their restoration. • Developed grievance handling procedures that guided the establishment of grievance management committees. • Worked with Mabiira and Kyenjojo district leadership to secure temporary accommodation for displaced PAPs. • Participated in securing tenancy agreements for PAPs with the new landlords. • Worked with PAPs to enroll for livelihood restoration training programmes including improved farming. • Participated in writing the final RAP report • Monitored the deliverance of targeted support to vulnerable groups especially the vulnerable PAPs.
Aug. 2014	<p>Employer: Savimaxx Limited</p> <p>Position: <u>Sociologist</u></p> <p>Client: Rural Electrification Agency</p> <p>For References:</p> <p>Ms. Esther Nassonko Kavuma,</p> <p>JENAK Investments Limited</p>	Uganda	<p>Project LL: Development of Resettlement Action Plan for the Ruhumba – Kashwa Rwebishuri Rural Electrification Project (Funded by World Bank)</p> <p>Project Features: Resettlement Action Plan Update</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook the reconnaissance visit and wrote the project inception report. • Undertook gap analysis of national legislations and international best practices. • Developed socioeconomic survey methods, household questionnaire & FGD guide. • Trained and provided support supervision to

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Social Development Specialist</p> <p>Email: sonkavuma@gmail.com</p> <p>Phone: +256 772 426 834</p>		<p>enumerators during data collection.</p> <ul style="list-style-type: none"> • Developed analytical grid for the quantitative socioeconomic survey. • Integrated socioeconomic baseline survey findings into the main RAP report. • Developed comprehensive stakeholder plans, analysis and inventory and wrote stakeholder engagement reports. • Drafted public consultation and summary stakeholder engagement reports. • Designed the compensation matrix to inform the compensation process. • Developed the vulnerability criteria that informed the identification of vulnerable PAPs. • Drafted the RAP implementation schedules and an institutional framework for RAP implementation. • Developed grievance resolution procedures as adopted from REA and resend tracker to track status of reported grievances. • Developed the M&E framework and integrated into the RAP report. • Wrote the RAP updated report.
February 2014 – May 2014	<p>Employer: BEC Engineers</p> <p>Position: <u>Sociologist</u></p> <p>Client: Ministry of Agriculture, Animal Husbandry & Fisheries (MAAIF)</p> <p>For References:</p> <p>Mrs. Esther Nassonko - Team Leader</p> <p>Email: sonkavuma@gmail.com</p> <p>Phone: +256 772 426 834</p>	Uganda	<p>Project MM: Feasibility study and design of Doho II, Ngenge and Mubuku II Irrigation Schemes under the Farm Income Enhancement and Forestry Conservation Project II – FIEFOC II (African Development Bank)</p> <p>Project Features: Preparation of the Feasibility Study Report</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed stakeholder engagement plan. • Undertook stakeholder mapping and engagement and wrote the engagement reports. • Developing socioeconomic survey methodology and tools. • Developed the analytical framework for socioeconomic survey. • Undertook socioeconomic data analysis and wrote socioeconomic section. • Established the constraints to land acquisition for irrigation schemes' facilities. • Assessed the modalities for allocation of land. • Established the crop enterprises of farmers to inform choice of enterprises. • Examined the problems experienced by smallholder farmers during crop and livestock production. • Assessed the current cropping systems among the smallholder farmers within the command area. • Examining the functionality of water user committees. • Examined the willingness to pay for irrigated water and to participate in project implementation activities. • Wrote the socioeconomic survey and social assessment report.
July 2012 – Oct 2012	<p>Employer: M&E Associates & Interface Consult Limited</p> <p>Position: <u>Sociologist</u></p>	Uganda	<p>Project NN: Feasibility study and detailed design for a Water Supply System for Lyantonde – Katwe – Kabatooro under Rukungiri water supply system (Funded by African Development Bank)</p> <p>Project Features: Undertaking a Feasibility Study</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Client: Ministry of Water & Environment</p> <p>For References:</p> <p>Mrs. Beatrice Mbabazi - Team Leader</p> <p>Email: mbabazi.beatrice@gmail.com</p> <p>Phone: +256 772 605871</p>		<p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook stakeholder engagements mapping and analysis. • Conducted public consultations and stakeholder engagements and wrote engagement reports. • Designed socioeconomic household survey methodology and tools and developed the data analysis plan. • Assessed production constraints among smallholder farmers. • Made projections of water & sanitation demands • Assessed the willingness of beneficiary households to pay for improved water and sanitation services. • Assessed the willingness water users to participation in Operation & Maintenance (O&M) of water facilities. • Undertook vulnerability assessment among the beneficiary communities. • Gender analysis and mainstreaming • Assessed the status of public sanitation facilities & solid waste management. • Assessed community's willingness to participate in project implementation activities.
<p>Aug. 2010 – Mar. 2011</p>	<p>Employer: Sunshine Project Limited</p> <p>Position: <u>Sociologist</u></p> <p>Client: Uganda Electricity Transmission Company Limited (UETCL)</p> <p>For References:</p> <p>Mr. Gregory Baine</p> <p>Managing Director – Sunshine Project</p> <p>email: info@sunshineprojects.co.ug</p> <p>Phone: +256 414 234 264</p>	<p>Uganda</p>	<p>Project OO: Resettlement Action Plan for the Opuyo-Moroto Project for Transmission Line Project (Funded by World Bank)</p> <p>Project Features: Preparation of the Resettlement Action Plan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Conducted community sensitization meetings in all the 59 villages across 10 sub-counties i.e. 5 districts • Wrote periodic engagement reports. • Supervised socioeconomic survey in all the project districts. • Undertook vulnerability assessment to identify vulnerable PAPs across all the 59 villages which informed developing resettlement options for vulnerable PAPs. • Developed an inventory of affected community resources and cultural properties through public consultations. • Assessed gender concerns and integrated them into RAP processes and report. • Facilitated display of strip maps across the 10 sub-counties and led the verification and disclosure processes. • Developed M&E indicators to track the payment processes. • Facilitated the formation and training of the grievance management committees by working with existing Itesot & Karamangos cultural dispute resolution mechanisms. • Worked with Sunshine as the contractor to prepare compensation dossiers including sensitizing communities on compensation entitlements and schedules. • Developed a compensation payment tracker to track the number of PAPs paid, PAPs with pending payments and compensation grievances. • Undertook livelihood restoration surveys to livelihood

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			<p>restoration activities.</p> <ul style="list-style-type: none"> • Undertook detailed vulnerability assessment for provision of targeted support. • Designed M&E indicators and tools for monitoring RAP implementation. • Wrote the socioeconomic section of the RAP report.
March 2010 – June 2021	<p>Employer: Employer: AAW Consulting Engineers</p> <p>Position: Sociologist</p> <p>Client: Ministry of Local Government (MoLG)</p> <p>For References:</p> <p>Mrs. Beatrice Mbabazi - Team Leader</p> <p>Email: mbabazi.beatrice@gmail.com</p> <p>Phone: +256 772 605871</p>	Uganda	<p>Project PP: Feasibility study, needs assessment and preparation of prototype designs for improvement of selected Central markets in Mbale and Tororo Municipalities (Funded by African Development Bank)</p> <p>Project Features: Undertaking a Feasibility Study</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Stakeholder mapping, analysis and engagements • Designing stakeholder engagement plans • Determining demands for improved market structures • Assessing functionality of management structures • Assessing affordability of rental charges among vendors • Assessing hygiene/sanitation condition of the markets • Assessing access to financial services among vendors • Analyzing value chain for new improved markets • Examining willingness to pay for new market structures. • Integrating vendors' views in feasibility report & prototype designs.
Sept 2009 – Feb 2010	<p>Employer: M&E Associates & Interface Consult Limited</p> <p>Position: Sociologist</p> <p>Client: Ministry of Water & Environment (MWE)</p> <p>For References:</p> <p>Mrs. Beatrice Mbabazi - Team Leader</p> <p>Email: mbabazi.beatrice@gmail.com</p> <p>Phone: +256 772 605871</p>	Uganda	<p>Project QQ: Feasibility study and detailed engineering design for Rural Towns Water & Sanitation Program – RTWSP in Teso sub-region. (Funded by African Development Bank)</p> <p>Project Features: Preparation of the Feasibility Study Report</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Developed socioeconomic survey methodology & tools • Profiled of beneficiary households. • Examined the willingness of beneficiary to pay for improved water services. • Projected demands for water supply systems among beneficiary households. • Assessed current O&M systems for existing water supply. • Proposed appropriate institutional O&M options. • Analyzed gender roles in the Operation & Maintenance of water facilities. • Wrote the socioeconomic and social assessment feasibility study sections.
April 2007 – August 2007	<p>Employer: AAW Consulting Engineers</p> <p>Position: Sociologist</p> <p>Client: Ministry of Water & Environment</p> <p>For References:</p> <p>Mrs. Beatrice Mbabazi - Team Leader</p>	Uganda	<p>Project RR: Feasibility study and detailed design for Bulk Water transfer system for various areas in Rakai district i.e. Kabuula, Kooki and Kakuto counties. (Funded by African Development Bank)</p> <p>Project Features: Preparation of the Feasibility Study Report</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Undertook stakeholders mapping and consultations.

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	<p>Email: mbabazi.beatrice@gmail.com</p> <p>Phone: +256 772 605871</p>		<ul style="list-style-type: none"> • Developed socioeconomic survey methodology and tools. • Assessed livelihood and production constraints. • Determined water demands for crop production among beneficiary households. • Projecting current and future water & sanitation demands • Determined the willingness of beneficiary communities to pay for improved services. • Assessed willingness among the community to participate in O&M for new water system. • Undertook gender and vulnerability assessment and integrated them into the feasibility report. • Assessed status of public sanitation facilities. • Identified implementation barriers for proposed water system. • Wrote the socioeconomic and social assessment sections.
Relevant Monitoring and Evaluation and Assessment Assignments			
Feb. 2022 – Apr. 2022	<p>Employer: Geo-Taxon Consult Ltd</p> <p>Position: <u>Consultant (M&E)</u></p> <p>Client: Karungi Crowns Enterprise</p> <p>For References:</p> <p>Dr. Paul Ssegawa Director – Geo-Taxon Consult Limited</p> <p>Email: paulssegawa@yahoo.com</p> <p>Phone: +256 772 411 469</p>	Uganda	<p>Project SS: Assessment the effectiveness of the Scale-up Inclusive Business Model to address the impact of Covid-19 on the degradation of the environment and Lake Mburo (Funded by UNDP – Uganda Country Programme)</p> <p>Project Features: Mid-term Assessment of the Scale-up Inclusive Business Model</p> <p>Activities Performed: Wrote the inception report, developed the social assessment methodology and tools, developed the stakeholder engagement plan, mapped stakeholders including Uganda Wildlife Authority and local government authorities, and the beneficiary communities around Lake Mburo conservation area, facilitated community consultations, undertook social assessments to assess the effectiveness of the project in economically empowering the targeted beneficiaries around Lake Mburo National Park through apiculture and aquaculture projects that aimed at enhancing the biodiversity conservation and environmental management of the national park ecosystem services.</p>
Jan. 2022 – Feb. 2022	<p>Employer:</p> <p>Position: <u>Consultant (M&E)</u></p> <p>Client: Care Denmark International/DINU</p> <p>For References:</p> <p>Dr. Jude Musoke – Managing Director - Kienbaum Management Consultants</p> <p>Email: judemusoke1@gmail.com</p> <p>Phone: +256 751 953 303</p>	Uganda	<p>Project TT: Mid-term evaluation of the inclusive market based development for smallholder farmers project under DINU-program funded by European Union (Funded by European Union under the Development Initiative for Northern Uganda)</p> <p>Project Features: Mid-Term Evaluation</p> <p>Activities Performed: Designed the evaluation conceptual framework, methodology and socioeconomic household survey tool, developed the analytical grid, automated the survey questionnaire on tablets using Kobo-survey-collect, analyzed the survey data to assess the progress made towards the achievement of the expected results and performance since the start of the project in January. Evaluated the results to make comparison with the outcome indicators outlined in the Project Monitoring, Evaluation, Accountability and Learning Framework. Wrote the final report that assessed the effectiveness of the project in achieving its specific</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
			results and the sustainability elements of the project within Karamoja sub-region.
Oct. 2021 – Feb. 2022	<p>Employer: Queensland & Leeds Consultants</p> <p>Position: <u>Consultant (M&E)</u></p> <p>Client:</p> <p>United Nations Capital Development Fund (UNCDF)</p> <p>For References:</p> <p>Mr. Robert Lwanga Co-Director – Queens Land & Leeds Consulting Engineers</p> <p>Email: nrlwanga@gmail.com</p> <p>Phone: +256 754 955 157</p>	Uganda	<p>Project UU: Baseline survey for Digital Finance, Agriculture, Health and Education sectors in Northern Uganda (Funded by United Nations Capital Development Fund of the UN)</p> <p>Project Features: Landscape baseline survey</p> <p>Activities Performed: Formulated of baseline survey tools, developed analytical grid, wrote the report to inform UNCDF’s programming and country strategy, generate a learning agenda and identified barriers, drivers and impact of the uptake and usage of UNCDF’s digital services. Identified the challenges faced by different actors across the sectors, developing indicators for performance monitoring.</p>
Oct. 2020 – Nov. 2020	<p>Employer: Oxfam Novib – Uganda/SOMO</p> <p>Position: <u>Local Consultant (M&E)</u></p> <p>Client: Netherlands Ministry of Foreign Affairs</p> <p>For References:</p> <p>Moses Muwanga – International M&E Consultant</p> <p>Email: muwangamoses@gmail.com</p> <p>Phone: +256 772 551 274</p>	Uganda	<p>Project VV: Right to Food Programme for Uganda to through Strengthening Civil Society, Citizens, the Public and Private Sector to improve policies and practices aimed at tackling injustices in Uganda’s Food System. (Funded by Netherlands Ministry of Foreign Affairs)</p> <p>Project Features: End of Programme Evaluation</p> <p>Activities Performed: Designed the evaluation matrix, developed M&E data collection methods, developed sampling technique and data collection tools, measured programme indicators against set project objectives, reviewed the programme theory of change, reviewed the programme M&E plan and relevant programme documentation, refined the M&E system through developing appropriate indicators and drafted the final end of programme report.</p>
Oct. 2019 Year – Mar. 2020	<p>Employer: UN Women</p> <p>Position: <u>Local Consultant (M&E)</u></p> <p>Client: African Union/Denmark Embassy in Ethiopia</p> <p>For References:</p> <p>Email: cliff.nuwakora@gmail.com</p> <p>Phone: +254 772 525 661</p>	Ethiopia	<p>Project WW: Mid-term evaluation of African Girls Can Code Initiative Pro-gramme (AGCCI) among 10 African Countries with Uganda and Ethiopia as unit of analysis (Funded by UN Women)</p> <p>Project Features: Mid-term Evaluation</p> <p>Activities Performed: Designed appropriate M&E tools, digitalized M&E tools, led field assessments and key informant interview, assessed the AGCCI theory of change, assessed the appropriateness of AGCCI project M&E indicators and wrote the final end of project M&E report.</p>
Nov. 2018 – Mar. 2019	<p>Employer: UNDP – Tanzania Country Programme</p> <p>Position: <u>Local Consultant (M&E)</u></p> <p>Client: UNDP – Tanzania Country Programme</p>	Tanzania	<p>Project XX: Outcome Midterm Evaluation of the Inclusive Democratic Governance Pillar for the UNDP Country Programme for Tanzania for 2016-2021 (Funded by UNDP Tanzania)</p> <p>Project Features: Midterm Programme Evaluation</p> <p>Activities Performed: Designed appropriate M&E data</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>For References:</p> <p>Cliff Nuwakora – International M&E Consultant</p> <p>For References:</p> <p>Email: cliff.nuwakora@gmail.com</p> <p>Phone: +254 772 525 661</p>		<p>collection tools, led virtual assessments i.e. key informant interviews, assessed the UNDP II logical pathway, assessed the appropriateness of UNDP II key performance indicators, assessed the UNDP Tanzania country programme M&E matrix and wrote the final outcome midterm evaluation report.</p>
Aug. 2018	<p>Employer: HURIWD - Uganda Investments Limited Position: Consultant (M&E)</p> <p>Client: Human Rights of Women & Girls with Disabilities (HURIWD) - Uganda</p> <p>For References:</p> <p>Mr. Henry Kizito Sseguya, Independent Consultant Email: hsegyi@gmail.com</p> <p>Phone: +256 701 074 718</p>	Uganda	<p>Project YY: End of Project Evaluation of the project on Respect, Protection and Promotion of the Sexual and Reproductive Health Rights of Women and Girls with Disabilities in Wakiso, Masaka, Luwero and Mbarara (Funded by UN Women)</p> <p>Project Features: End of project evaluation</p> <p>Activities Performed: Developed M&E data collection methods and tools, assessed the project key performance indicators against set project objectives, assessed the project logical framework, examined the project M&E plan, reviewed relevant project documentation, refined project M&E framework through developing appropriate indicators, tools and data collection methods and wrote the final end of HURIWD project evaluation report.</p>
Jul. 2016	<p>Employer: Caritas, Justice & Peace Department Kampala</p> <p>Position: Co-Evaluator (M&E)</p> <p>Client: Uganda Catholic Commission for Justice and Peace</p> <p>For References:</p> <p>Rev. Fr. Peter Musumba Director – Caritas, Justice & Peace Kampala Email: musumbaug@yahoo.com;</p> <p>Phone: +254 772 358 150</p>	Uganda	<p>Project ZZ: Community Needs Assessment on the Knowledge Gaps on the Effectiveness of Land Response Mechanisms in Busukuma, Siisa and Namayumba sub-counties – Wakiso District (Funded by USAID)</p> <p>Project Features: The purpose was to identify knowledge gaps and build and identify obstacles to land justice, lack of legal redress and existing referral pathways</p> <p>Activities Performed: Developed the conceptual framework, needs assessment methodology and tools, prepared the analytical framework, developed the data collection protocols, trained the research team on collection technical, analyzed the data to assess the effectiveness of the land response mechanisms in the interventions sub-counties in Wakiso district, wrote the final report. Prepared recommendations that were used to inform future programming of the project.</p>
Apr. 2016 – May 2016	<p>Employer: Caritas, Justice & Peace Department Kampala</p> <p>Position: Co-Evaluator (M&E)</p> <p>Client: Trociare</p> <p>For References:</p> <p>Rev. Fr. Peter Musumba Director – Caritas, Justice & Peace Kampala Email: musumbaug@yahoo.com;</p> <p>Phone: +254 772 358 150</p>	Uganda	<p>Project AAA: Evaluation of Kampala Archdiocese Program on Addressing Domestic Violence through the Start Awareness Support Action (SASA) Approach in the Districts of Kampala, Wakiso and Mpigi. (Funded by UK Aid)</p> <p>Project Features: End of programme Evaluation</p> <p>Activities Performed: Developed M&E data collection methodology and tools, undertook field assessments with beneficiary communities, assessed the project logical matrix, reviewed the project quarterly reports and wrote the final end of project evaluation report.</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
Nov. 2014 – Jan. 2015	<p>Employer: Plan – Uganda</p> <p>Position: Consultant (M&E)</p> <p>Client: Plan International, CARE-Uganda & Barclays</p> <p>For References: Mrs. Margret Kemigisha International Consultant Email: kemimargaret@gmail.com Phone: +254 773 276 225</p>	Uganda	<p>Project BBB: Impact Assessment Study – Banking on Change (BOC) Village Saving and Loan Association (VSLA) Baseline Survey in the districts of Napak, Katakwi, Soroti, Arua, Kitgum, Lamwo, Busia, Iganga, Kasese and Kabarole (Funded by Plan International UK)</p> <p>Project Features: Impact Assessment Study</p> <p>Activities Performed: Developed the study tools, wrote stakeholder engagement plans and reports, undertook field assessment among project beneficiaries, developed the socioeconomic analytical grid, reviewed of project documents, assessed the adequacy of project strategies in targeting VSLA and wrote Impact Assessment report.</p>
Jan. – Feb. 2014	<p>Employer: Market Realms Limited</p> <p>Position: Evaluator (M&E)</p> <p>Client: International Union for Conservation of Nature (IUCN)</p> <p>For References: Mr. Bugembe Richard, Co-Director Market Realms Limited</p> <p>Email: rbugembe@gmail.com</p> <p>Phone: +256 751 390 636</p>	Uganda	<p>Project CCC: Evaluation of the Community Environmental Conservation Fund (CECF) and its Governance in improving and diversifying the livelihoods of communities in an environmentally sound manner in Northern Uganda and Karamoja sub-region (Funded by United Nations Environment Programme)</p> <p>Project Features: End of Programme Evaluation</p> <p>Activities Performed: Designed appropriate M&E tools and methods, assessed the CECF theory of change in improving community livelihood diversity, assessed the appropriateness of CEFC project M&E indicators, developed procedures for application of organizational M&E system and wrote the programme evaluation report.</p>
Marc h 2013	<p>Employer: Development Link Consult Limited</p> <p>Position: Evaluator (M&E)</p> <p>Client: Uganda Reproductive Health Bureau</p> <p>For References: Mr. Deo Yiga, CEO-Development Link Consult Ltd.</p> <p>Email: dyiga@devptlinks.org</p> <p>Phone: +256 782 323 863</p>	Uganda	<p>Project DDD: End of Project Evaluation to assess the Responsiveness of Health Facilities in Uganda to the Needs of Sexually Abused Children (Funded by National Council for Children – Government of Uganda)</p> <p>Project Features: End of Project Evaluation</p> <p>Activities Performed: Developed data collection tools & sampling methodologies, undertook field assessments, developed appropriateness of project design & strategies, reviewed, project logical matrix/framework, reviewed the relevant project documents and quarterly reports and wrote the final assessment report.</p>
Jun. 2012 – Jul. 2012	<p>Employer: World Vision</p> <p>Position: Evaluator (M&E)</p> <p>Client: World Vision/Calibre International</p> <p>For References: Martin Busingye, M&E Specialist, World Vision Uganda</p> <p>Email: martinbusingye2@gmail.com</p>	Uganda	<p>Project EEE: End of project evaluation for the Abim Livelihood Programme to identify the contribution of the programme in improving the welfare of households in the District (Funded by World Vision)</p> <p>Project Features: End of Project evaluation</p> <p>Activities Performed: Developed data collection tools & methods, supervised data collected, developed the qualitative and quantitative analytical frameworks, reviewed the project theory of change, reviewed project quarterly reports and wrote the end of project evaluation report.</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	Phone: +256 781 818 180		
Sept. 2011 – Dec. 2011	<p>Employer: Market Realms Limited</p> <p>Position: <u>Evaluator (M&E)</u></p> <p>Client: International Union for Conservation of Nature (IUCN) & Action Against Hunger (ACF)</p> <p>For References:</p> <p>Mr. Bugembe Richard, Co-Director Market Realms Limited</p> <p>Email: rbugembe@gmail.com</p> <p>Phone: +256 751 390 636</p>	Uganda	<p>Project FFF: Evaluation of the Integrated Water Resource Management in the Okok Sub-catchment (Funded by United Nations Environment Programme)</p> <p>Project Features: Assessment of Customary Water Rights in Karamoja sub-region</p> <p>Activities Performed: Developed participatory methods and tools, catalogued customary rights and practices on water use and management, analyzing of water use and demand, mapping stakeholder, undertook situational analysis of water management issues in the districts of Moroto, Napak, Kotido, Kaabong & Abim. Wrote the final assessment report.</p>
Mar. 2010 – May 2010	<p>Employer: Market Realms Limited</p> <p>Position: <u>Evaluator (M&E)</u></p> <p>Client: Aga Khan Foundation Uganda</p> <p>For References:</p> <p>Mr. Bugembe Richard, Co-Director Market Realms Limited</p> <p>Email: bugembe.richard@gmail.com</p> <p>Phone: +256 751 390 636</p>	Uganda	<p>Project GGG: End of project Evaluation “Enhancement of Universal Primary Education for Poor Communities in Kampala and Wakiso Districts (Funded by Aga Khan Foundation Uganda)</p> <p>Project Features: End of Project Evaluation</p> <p>Activities Performed: Developed monitoring and evaluation tools and collected data among the poor communities and slums to assess the effectiveness of the project in enhancing knowledge. Part of the team that wrote the final end of evaluation report titled Practice of children’s rights and increased access to education for working and street children.”</p>
Feb. 2010	<p>Employer: Liberal Consult Limited</p> <p>Position: <u>Evaluator (M&E)</u></p> <p>Client: Meeting Point International</p> <p>For References:</p> <p>Mr. John Bosco Kavuma Director- Liberal Consult Limited</p> <p>Email: bokavuma40@gmail.com</p> <p>Phone: +256 772 871 414</p>	Uganda	<p>Project HHH: Support to Improvement Access to Basic Education for Vulnerable and HIV/AIDS orphaned children in Kampala, Kitgum, Jinja and Hoima districts (Funded by xx)</p> <p>Project Features: End of Project Evaluation</p> <p>Activities Performed: Designed the M&E data methodology and tools, supervised data collection among beneficiary educational institutions, facilitated key informant interviewed, and was part of the team that wrote the end of project evaluation report.</p>
Jan. 2010 – Feb. 2010	<p>Employer: Liberal Consult Limited</p> <p>Position: <u>Co-Evaluator (M&E)</u></p>	Uganda	<p>Project III: Livelihoods and Life Skills for Vulnerable Groups in Farmer Field Schools & Junior Farmer Field Schools in Northern and North Eastern Uganda (Funded by UNIFEM)</p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	<p>Client: United Nations Development Fund for Women (UNIFEM)</p> <p>For References:</p> <p>Mr. John Bosco Kavuma Director- Liberal Consult Limited</p> <p>Email: bokavuma40@gmail.com</p> <p>Phone: +256 772 871 414</p>		<p>Project Features: Baseline survey and Curriculum Review of Farmer Filed Schools.</p> <p>Activities Performed: Developed data collection methods and tools, developed adequate key performance indicators, reviewed curriculum to assess adequacy in meeting training needs, assessed the prevalence of GBV in beneficiary communities, reviewed of relevant project documentation and compiled the final baseline survey report.</p>
Oct. 2006 – Nov. 2006	<p>Employer: Market Realms Limited</p> <p>Position: <u>Evaluator (M&E)</u></p> <p>Client: PAMOJA Africa Reflect Network</p> <p>For References:</p> <p>Mr. Bugembe Richard, Co-Director Market Realms Limited</p> <p>Email: bugembe.richard@gmail.com</p> <p>Phone: +256 751 390 636</p>	Uganda	<p>Project JJJ: On-line evaluation of the Status of Adult Literacy in Africa: The Case of National PAMOJA Chapters (Funded by PAMOJA Africa Reflect Network)</p> <p>Project Features: Programme evaluation and development of a policy paper.</p> <p>Activities Performed: Designed the evaluation tools and methodology, reviewed relevant literature, interviewed key informants, consolidated the findings into the global monitoring processes report. Developed a policy brief to inform the revitalization of the adult education sector.</p>
Jun. 2006 – Sept. 2006	<p>Employer: Liberal Consult Limited</p> <p>Position: <u>Co-Evaluator (M&E)</u></p> <p>Client: Uganda Reproductive Health Bureau (URHB)</p> <p>For References:</p> <p>Mr. John Bosco Kavuma Director- Liberal Consult Limited</p> <p>Email: bokavuma40@gmail.com</p> <p>Phone: +256 772 871 414</p>	Uganda	<p>Project KKK: Community HIV/AIDS Intervention Project (CHAIP) among marginalized youth communities and slums in urban areas in Jinja, Iganga, Mayuge, Bugiri, Kamuli, Hoima and Kampala (Funded by Uganda Reproductive)</p> <p>Project Features: <u>Baseline Survey</u></p> <p>Activities Performed:</p> <p>Developed the baseline survey methods and tools, supervised data collection, analyzed qualitative and quantitative baseline data, generated data to inform development of project indicators for future benchmarking, part of the team that wrote the final baseline survey report.</p>
May 2005	<p>Employer: JRB Consults Limited</p> <p>Position: <u>Associate Consultant (M&E)</u></p> <p>Client: Participatory Ecology & Land Use Management (PELUM)</p> <p>For References:</p>	Uganda	<p>Project LLL: Public Expenditure project on the Agricultural Sector in Uganda (Funded by PELUM – Africa)</p> <p>Project Features: <u>Public Expenditure Assessment</u></p> <p>Activities Performed: <u>Desk review and interviewed key informants to examine the equality and equity in the Resource Allocations Strategy as adopted by Government at national level and wrote the assessment report</u></p>

Period	Employing organization and your title/ position. Contact info for references.	Country	Summary of activities performed relevant to the Assignment
	Mr. Joseph Robert Bugembe, CEO, JRB Consult Limited Email: bugembejrconsults@gmail.com Phone: +256 772 464 610		
Jul. 2004 – Sept. 2004	Employer: JRB Consults Limited Position: Co-Evaluator (M&E) Client: Marine Resource Assessment Group For References: Mr. Joseph Robert Bugembe Email: bugembejrconsults@gmail.com Phone: +256 772 464 610	Uganda	Project MMM: Impact of HIV/AIDS in Risky Fishing Communities of Uganda (Funded by UK Aid) Project Features: Socioeconomic Survey Activities Performed: Designing of survey tools, development of survey methodology and workplan. Collected data among the fishing communities to explore the opportunities for increasing security and diversification of possible social safety nets, changing social structure of communities to strengthen social protection and public awareness to arouse health seeking behavior.

Language Skills (Indicate Only Languages in Which You Can Work):

Luganda (Excellent)
English (Excellent)

Expert's Contact Information: martinkasozi@gmail.com Mob: +256 782 997 284 WhatsApp: +256 702 779 820

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Martin KASOZI
27/05/2025

Name of Expert



Signature

Day /Month/ Year

Antonia Nyamukuru, PhD

BEILISCH CONSULT - SMC LIMITED, P. Box 187626, Kampala •
nyamukuru@gmail.com • +256 (0) 772 304 010

**ENVIRONMENTAL IMPACT ASSESSOR / ENVIRONMENTAL AUDITOR / GLOBAL
BIODIVERSITY STANDARD ASSESSOR / RESEARCHER**

Antonia Nyamukuru is an Environmental Practitioner Consultant and Researcher, dedicated to practice in environmental impact assessment and environmental audits. Leveraging over 10 years in conducting Environmental Impact Assessments, Environment and Social Audits, preparing Environmental and Social Management Plan, Decommissioning and Restoration Plan and Final Environment Mitigation Report across diverse clients. As a researcher, Antonia excels in conducting highly interdisciplinary research spanning climate change mitigation and adaptation measures, biodiversity conservation, land use system, conservation of medicinal plants, drivers of deforestation and forest degradation. Proven success in delivering tasks, report writing and research publications.

EDUCATION & CREDENTIALS

PhD in Environment and Natural Resources (2021) – Makerere University

MSc in Environment and Natural Resources (2013) – Makerere University

Bachelor of Social Work and Social Administration (2005) – Makerere University

AREAS OF EXPERTISE IN ENVIRONMENTAL PRACTICE

- Plant Ecology, Animal Ecology • Carbon Stock Assessment • Biodiversity Assessment
 - Socio-economic Assessment • Ethnobotany • Land Use Assessment,
-

SELECTED PROFESSIONAL EXPERIENCE

Environmental Impact Assessor, 2013 – Present

A partner with environmental practitioners to provide consultancy services in Environmental Impact Assessment (EIA) and Environment Audit (EA) for projects funded by African Development Bank (AfDB), World Bank (WB), European Union (EU), Uganda Government and Private Developers.

Environment and Social Audit of project auxiliary facilities of Koboko-Yumbe-Moyo Road (105 km) Upgrade (Quarry and campsite) 2025 – Ongoing
ZHONGMEI Engineering Group Limited, Funded by World Bank

Environmental Auditor (Ecologist)

- Team mobilization
- Prepared Audit Terms of References
- Audited project auxiliary facilities including camps and equipment yards in Koboko, Yumbe and Moyo and a quarry in Yumbe

ESIA of project auxiliary facilities of Koboko-Yumbe-Moyo Road (105 km) Upgrade (Quarries, Asphalt Plant and borrow pits) 2024 – 2025
ZHONGMEI Engineering Group Limited Funded by World Bank

Environmental Impact Assessor (Ecologist)

- Team mobilization
- Prepared Scoping and Terms of References for quarries and asphalt plant in Yumbe and Moyo and borrow pits along the alignment
- Assessment of quarries, asphalt plant and borrow pits
- Consultations on ESIA for quarries, asphalt plant and borrow pits
- Prepared ESIA Reports

ESIA of project auxiliary facilities for Upgrade of Masaka-Kyotera-Mutukula Road (89.5km) and Rehabilitation of Nyendo Villa Maria Road (11km) and access roads (7km) 2024 – 2025
Chongqing International Construction Corp. (CICO) Funded by Uganda Government

Environmental Impact Assessor (Ecologist)

- Prepared Scoping and Terms of References for camp and equipment yard and batching plant at Kigenya Cell, Kyotera, borrow pits and dumpsites along the alignment
- Assessment of camp site, batching plant, borrow pits and dumpsites
- Consultations on ESIA for campsite, batching plant, borrow pits and dumpsites
- Prepared ESIA Reports
- Prepared Project Briefs

Environmental Compliance Audit Pertaining to the operations of Kigambira Safari Lodge in Lake Mburo National Park 2023
Karungi Crown Enterprises (U) Limited

Environmental Impact Assessor (Ecologist)

- Prepared Audit Terms of References

- Audited project auxiliary facilities including front office and administrative area, residential bands, restaurant and kitchen area, swimming pool and workers' dormitories
- Participated in drafting Compliance Environment and Social Audit for the above facilities

Feasibility Studies and Detailed Design for Upgrading Manibe-Kulikulinga -Obongi-Adjuman Road (138km)	2023-2024
M/S LEA International Ltd in Association with KOM Consult Ltd	

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Coordinated socio-economic survey and report writing
- Collaborated in stakeholder consultations
- Participated in drafting ESIA Report

Feasibility Studies and Detailed Design for Atiak – Kitgum (108) Road Upgrade	2023-2024
M/S Sering Ingegneria in Association with Anchor Engineering Services Ltd	

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Coordinated socio-economic survey and report writing
- Collaborated in stakeholder consultations
- Participated in drafting ESIA Report

Feasibility Studies and Detailed Design for Kamuli-Kaliro-Pallisa (89km) Road Upgrade	2023
M/S LEA International in Association with KOM Consult Ltd	

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Coordinated socio-economic survey and report writing
- Collaborated in stakeholder consultations
- Participated in drafting ESIA Report

Environment and Social Audit of project auxiliary facilities for Upgrade of Atiak-Laropi Road (66km)	2022 – 2024
STRABAG International GmbH, Funded by European Union	

Environmental Auditor (Ecologist)

- Prepared Audit Terms of References
- Audited project auxiliary facilities including camp and equipment yard, quarry, asphalt plant and borrow pits
- Drafted Compliance Environment and Social Audit for the above auxiliary facilities

Environment and Social Audit of project auxiliary facilities of constructing Mbarara Municipality Roads (23km) 2022-2024

Chongqing International Construction Corp. (CICO)

Environmental Auditor (Ecologist)

- Prepared Audit Terms of References
- Audited project auxiliary facilities including camps and equipment yards quarry and asphalt plant
- Drafted Compliance Environment, Health, Safety and Social Audit for the above auxiliary facilities

ESIA of project auxiliary facilities for Upgrade of Atiak-Laropi Road (66km) 2021 – 2025
STRABAG International GmbH, Funded by European Union

Environmental Impact Assessor (Ecologist)

- Prepared Scoping and Terms of References for camp and equipment yard in Olia Village, Adjumani District, quarry and asphalt plant in Okutulu/Ojigo Villages, Adjumani District and borrow pits in Adjumani and Amuru Districts
- Conducted detailed ESIA baseline studies for camp and equipment yard, quarry, asphalt plant and borrow pits
- Drafted ESIA Report
- Participate in writing the decommissioning plans spanning camp and equipment yard, quarry and asphalt plant
- Collaborated in writing the Final Mitigation Plan for the project

Camp and equipment yard for Upgrade of Kira-Matugga Road (23km) 2021
Chongqing International Construction Corp. (CICO)

Environmental Impact Assessor (Ecologist)

- Prepared Scoping and Terms of References for camp and equipment yard at Mayirikiti-Kiti village, Wakiso
 - Conducted ESIA baseline studies for camp and equipment yard
 - Collaborated in stakeholder consultations
-

Environment and Social Audit of project auxiliary facilities of Bumbobi-Lwakhakha road (44.5km) 2021
China State Construction Engineering Corporation Limited (CSCEC)

Environmental Auditor (Ecologist)

- Prepared Audit Terms of References
- Audited camps and equipment yards in Bumulyanyuma A and Manyali Villages, Manafwa District
- Drafted Audit Report

Feasibility Studies and Detailed Design for Karenga -Kapedo-Kaabong Road (73 km) Upgrade 2021
M/S LEA International in Association with KOM Consult, Contracted by UNRA

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Collaborated in stakeholder consultations

Feasibility Study and Detailed Design for Upgrading Bwondha-Mayuge-Iganga Road Links, Bugiri-Nankoma Link and Namayingo Lugala (93Km) Road 2021
M/S LEA International in Association with KOM Consult Contracted by UNRA

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Participated in drafting Scoping Report

Feasibility Study and Detailed Design for Upgrading Muko-Katuna-Muko-Kachwekano-Kamuganguzi Road (104.6km) 2021
M/S Via International Engineering Consultancy LLC and Adriax Consult SMC Limited Contracted by UNRA

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species and proposed mitigation measures
- Collaborated in stakeholder consultations
- Participated in drafting ESIA Report

Feasibility study and Detailed Design for Upgrading Muhanga-Kisizi-Rwanshamire Road (78.8Km) 2020-2022
M/S Sering Ingegneria in Association with Anchor Engineering Services Ltd

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Collaborated in stakeholder consultations
- Participated in drafting ESIA Report

Feasibility Study and Detailed Design for Upgrading Kazo-Buremba-Kyegegwa (82km) Road

2020

M/S LEA International Ltd and KOM Consult Ltd Contracted by UNRA

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Collaborated in stakeholder consultations
- Participated in drafting ESIA Report

Feasibility and ESIA Study of Local Economic Infrastructure in Hoima, Kikuube and Buliisa Districts

2020

JBN Consults and Planners Contracted by Ministry of Lands, Housing & Urban Development (MLHUD) and Funded by World Bank

Environmental Impact Assessor (Ecologist)

- Undertook environmental screening of facilities including 13 markets in above districts, landing sites in Buhuka and Runga, 25 fish cages in Hoima and a slaughterhouse in Hoima
- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Collaborated in stakeholder consultations

Feasibility Studies and Detailed Design of Mega Irrigation Schemes Agoro Hills, Nyimur, Purongo, Pailyec, Mucwini, Lagoro, Atyak, Imvepi, Aswa ranch, Irrigation Schemes in Lamwo, Amuru and Nwoya Districts

2020

Hydroarch Consulting Engineers, Contracted by Ministry of Water and Environment

Environmental Impact Assessor (Ecologist)

- Undertook environmental screening for schemes
- Conducted floral biodiversity inventories
- Determined conservation status of encountered species
- Proposed mitigation measures
- Collaborated in stakeholder consultations
- Participated in drafting scoping report

Construction of Workers' Camp and Equipment Yard for Rehabilitation of Masaka Town Roads (7.3km)	2020
Chongqing International Construction Corp. (CICO), Contracted by UNRA	

Environmental Impact Assessor (Ecologist)

- Assessment of camp and equipment yard in Kantungamye LC1, Masaka City
- Prepared Scoping and Terms of References for camp and equipment yard
- Conducted Stakeholder Consultations
- Drafted ESIA

ESIA study during Feasibility Studies for Upgrade of the Koboko-Yumbe –Moyo Districts	2019
JBN Consults and Planners Contracted by UNRA	

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
- Determined conservation status of encountered species measures
- Proposed mitigation measures

Environment and Social Audit of project auxiliary facilities of Hoima – Butiaba-Wanseko Road Upgrade (115km)	2019-2024
Chongqing International Construction Corp. (CICO)	

Environmental Auditor (Ecologist)

- Prepared Audit Terms of References
- Audited project auxiliary facilities including camps and equipment yards, quarry, asphalt plant and borrow pits
- Drafting Compliance Environment, Health, Safety and Social Audit for the above auxiliary facilities

Environment and Social Audit of Isimba Power Dam Construction Project	2018
JBN Consults and Planners Funded by Ministry of Energy and Mineral Development	

Environmental Auditor (Ecologist)

- Audited biodiversity, rock quarry, borrow areas, runoff management, transmission line
- Stakeholder consultations
- Participated in writing the biodiversity Audit Report

Construction of Odroo Bridge and Wariki Bridge and Approach Roads, Arua District	2018
Chongqing International Construction Corp. (CICO)	

Environmental Impact Assessor (Ecologist)

- Conducted Floral Survey for bridges
- Conducted Stakeholder Consultation
- Participated in Writing Project Brief

Camp of Upgrade of Kapchorwa-Suam Highway (77km) Road
2018

China State Construction Engineering Corporation Limited (CSCEC)

Environmental Impact Assessor (Ecologist)

- Assessment of camp and equipment yard
- Conducted Stakeholder Consultation
- Participated in Writing ESIA Report of camp

**Rock Extraction Site in Bugungu Wildlife Reserve, Buliisa District
and Traffic Diversion at the escarpment on Hoima-Butiaba-Wanseko Road**
Chongqing International Construction Corp. (CICO)

2018

Environmental Impact Assessor (Ecologist)

- Conducted Floral Survey
- Conducted Stakeholder Consultation
- Participated in Writing Project Briefs
- Drafting ESMP

**Environment and Social Impact Assessment of Mukono-Katosi 33kv line and
Iganga Substation transmission line (33kv) upgrade**
UMEME

2018

Environmental Impact Assessor (Ecologist)

- Conducted Floral Survey along the lines
- Conducted Stakeholder Consultation
- Participated in Writing ESIA Reports

**ESIA of project auxiliary facilities of Hoima –Butiaba-Wanseko
Road Upgrade (115km)**
Chongqing International Construction Corp. (CICO)

2018-2023

Environmental Impact Assessor (Ecologist)

- Prepared Scoping and Terms of References for camp and equipment yard in Kihungura, Hoima; Boma Village, Buliisa; quarries and asphalt plant in Kigorobya, Hoima and Akiimi B, Buliisa and borrow pits along the alignment
 - Assessment of camp and equipment yard, quarries, asphalt plant and borrow pits
 - Consultations on ESIA for camp and equipment yard, quarries, asphalt plant and borrow pits
 - Drafted ESIA Reports
-

Construction of Rugendabara and Kibiito Switch Stations UMEME	2017
Environmental Impact Assessor (Ecologist)	
<ul style="list-style-type: none"> - Conducted Floral Survey at the two switch stations - Conducted Stakeholder Consultation - Participated in Writing ESIA Reports 	
Workers' camp and Equipment yard for Kamuli Municipality Road Construction and Other Selected Roads Chongqing International Construction Corp. (CICO)	2016
Environmental Impact Assessor (Ecologist)	
<ul style="list-style-type: none"> - Conducted Floral Survey - Collaborated in Stakeholder Consultation - Participated in writing ESIA Report 	
Kamuli Municipality Road Construction and Other Selected Roads Chongqing International Construction Corp. (CICO) Contracted by UNRA	2016
Environmental Impact Assessor (Ecologist)	
<ul style="list-style-type: none"> - Conducted Floral Survey for road and quarry - Collaborated in Stakeholder Consultation - Participated in drafting EMSP - Participated in drafting Scoping and ESIA Reports 	
ESIA for Kitgum –Kidepo Valley Highway (115.8km) Road Upgrade KOM Consult Ltd Contracted by UNRA	2015 - 2016
Environmental Impact Assessor (Ecologist)	
<ul style="list-style-type: none"> - Conducted floral inventories - Collaborated in stakeholder consultations - Determined conservation status of encountered species - Proposed mitigation measures 	
ESIA for proposed Agro Products Warehouse Henry and Agnes Semwanga Lule	2015
Environmental Impact Assessor (Ecologist)	
<ul style="list-style-type: none"> - Conducted floral inventories - Collaborated in stakeholder consultations - Participated in drafting ESIA report 	

ESIA Update for Kapchorwa-Suam Highway (77km)

2015

KOM Consult Ltd Contracted by UNRA

Environmental Impact Assessor (Ecologist)

- Conducted floral biodiversity inventories
 - Determined conservation status of encountered species
 - Proposed mitigation measures
-

Establishing Stone Quarry in Ntungamo District

2015

ZHONGMEI Engineering Group Limited

Environmental Impact Assessor (Ethnobotanist)

- Conducted floral biodiversity inventories
 - Prepared Scoping and Terms of References for quarry in Ntungamo
 - Assessment of quarry
 - Collaborated in Stakeholder Consultations
-

Acholi-Bur – Kitgum-Misingo Road Upgrade (86km)

2014

Chongqing International Construction Corp. (CICO)

Environmental Impact Assessor (Ethnobotanist)

- Conducted floral inventory on camp and quarry
 - Collaborated in stakeholder consultations
 - Determined conservation status of encountered species
 - Proposed mitigation measures
-

Birara Bridge in Rukungiri, Kanungu Districts

2014

UNRA

Environmental Impact Assessor (Ethnobotanist)

- Conducted floral inventory
 - Collaborated in stakeholder consultations
 - Determined conservation status of encountered species
 - Proposed mitigation measures
-

Upgrading Bobi-Corner Ayer Highway

2013

M/S LEA International and KOM Consult Ltd Funded by World Bank

Environmental Impact Assessor (Ethnobotanist)

- Conducted floral inventory

- Collaborated in stakeholder consultations
- Determined conservation status of encountered species
- Proposed mitigation measures

Kafu-Kamudini Road Rehabilitation and Upgrade

2013

UNRA

Environmental Impact Assessor (Ethnobotanist)

- Conducted floral inventory
 - Collaborated in stakeholder consultations
 - Determined conservation status of encountered species
 - Proposed mitigation measures
-

MEMBERSHIPS

1. Member, Uganda Association for Impact Assessment
 2. Registered and Certified Environmental Practitioner with the National Environment Management Authority (NEMA) – Uganda. (Certificate Numbers: CC/EIA/94/25 and CC/EA/94/25)
 3. Global Biodiversity Standard Assessor (A0061)
 4. Member, Society for Ethnobotany
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RELEVANT TRAININGS

- 24th September – 25th October 2025 Research Funding & Grant Writing by African Science Frontiers Initiatives
- 24th May – 26th July 2025 Art of Academic Supervision by African Science Frontiers Initiatives
- 29th July – 3rd August 2024 Global Biodiversity Standard Training and Certification workshop by Tooro Botanical Gardens (TBG) and the Botanic Gardens Conservation International (BGCI) Hub partner- Centre for Ecosystem Restoration Kenya (CERK)
 - 15th – 17th September 2021 Towards shifting paradigms in agriculture for a healthy and sustainable future, University of Hohenheim, Germany
 - 3rd – 4th November 2020 National Dissemination Workshop - Building capacity for REDD+ in East Africa for improved ecosystem health for sustainable livelihoods in East Africa
 - 24th -28th September 2018 Statistical Data Analysis using the R Programming Language by the Swedish University of Agricultural Sciences at Makerere University
 - 20th – 23rd March 2018 Scholarly Writing and Commutation skills, Makerere University

- 12th – 23rd June 2017 Philosophy of methods in Makerere University
- 15th – 19th November 2016 Innovative Metrics and Methods for Agriculture and Nutrition Actions (IMMANA) Decision Modeling Workshop by World Agroforestry Centre, Uganda
- 22nd – 26th August 2016 Data paper Publishing and Environmental Niche Modelling by Endangered Wildlife Trust, South Africa at Makerere University
- 11th – 16th July 2016 Reducing Emissions from Deforestation and Forest Degradation (REDD+) Academy by The Ministry of Water and Environment, Forestry Sector Support Department/REDD+ Secretariat in Masindi
- 23rd – 25th May 2016 Building Knowledge to Support Climate Change Adaptation for Pastoralist Communities in East Africa” in Tanzania, Kenya, Uganda, South Sudan and Sudan by The University of Dar es Salaam through the Centre for Climate Change Studies (CCCS) in Uganda
- 5th – 26th January 2015 Statistical Programming in R by Norwegian University of Life Science in Norway
- 7th – 8th August 2014 Fundraising training workshop by the Network of African Science Academies in Nairobi
- 19th – 20th February 2014 Research Management and Administration workshop by the University of Bergen at Makerere University
- 26th – 27 June 2013 Clean Development Mechanism Training workshop on Developing and Financing Cleantech Projects and the Role of Climate Finance, Uganda
- 7 – 13th February 2013: MUTHI clinical trials workshop. Kampala, Uganda (Focus on African researchers involved in, or planning to conduct clinical research and development of traditional herbal medicines.
- 18th -22nd February 2013 Building capacity to reduce emissions and conserve the environment in Uganda
- 14th-15th November 2012 Clean Development Mechanism Training workshop, Uganda
- 23rd August 2012 Science communication training workshop, Uganda
- 10th -12th January 2012 Statistical applications to data analysis and scientific writing, Uganda
- 30th May – 03 June 2011 Training course on Carbon Footprint Assessment for Sustainable Watershed Management under Changing Environments, Uganda
- 24th – 26th January 2011 workshop on NextGen training on Landscape genome, Uganda
- 21st – 22nd March 2005 Training in conflict Resolution and Management, Uganda

SELECTED RESEARCH PROJECTS

- 2015 – 2020 Building capacity for REDD+ in East Africa for improved ecosystem health
for sustainable livelihoods in East Africa, funded by Norwegian Programme for Capacity Building in Higher Education and Research for Development (NORHED) under the NORAD (Uganda, Norway)
- 2014 – 2015 Sub project 4, Reduction of Post-Harvest Losses and Value Addition in East
African Food Value Chains funded by the German Federal Ministry of Education and Research (Uganda, Germany)
- 2012 – 2013 Sustainable management of forests on private land through collaborative partnerships with rural communities, funded by International Foundation for Science (Uganda)
- 2012 – 2012 Carbon sequestration of selected indigenous trees in Uganda’s rural landscapes, funded by Rockefeller Foundation (Uganda)
- 2011 – 2013 Value Chain Analysis and Development of Plant-Derived Medicinal Products For Management of HIV/AIDS in the Face of Climate Change in the Lake Victoria Basin. Funded by VicRes/IUCEA (Uganda, Kenya, Rwanda, Burundi)
- 2006 – 2010 NUFU Ecological project, funded by The Norwegian Research Council and the Norwegian State Education Loan Fund funded the study (Uganda, Norway)

PUBLICATION

- ❖ 2025 Abdullahi AH, Abdoon AAS, Oladejo AF, **Nyamukuru A**, Ikpendu CN,
Ugwah-Oguejiofor CJ, Nwokoro CC, Egga DK, Fondze-Fombe EF, Rahamtalla FA, Hamed HR, Ahmed HMM, Idris I, Adedeji IA, Ukwueze I, Shammatt IM, Abbaker I, Ogol L, Bayoumi MA, Keinamma MW, Ogum MA, Abaker MBM, Taha NEH, Eluyera O, Farag OAA, Nkweteyim PT, Oduyemi RO, Meek RY, Nasr SYMA, Abanigbe SA, Suliman SM, Salih SS, Elfaki S, Ahmed SEA, Elsammani TO, Orji U, Musa YAS. Personal supervision philosophy statements of participants in ASFI Art of Academic Supervision course 2025. ASFI Research Journal. 2025:2(1) DOI: e13065. doi.org/10.70040/asfirj-yjya-sgkk
- ❖ 2023 **Nyamukuru A**, Whitney CW, Tabuti JRS, Esaete J, Low M. Allometric models for aboveground biomass estimation of small trees and shrubs in African savanna ecosystems. *Trees, Forests and People* 11 (2023) 100377
- ❖ 2019 **Nyamukuru A**. Wild mammal dung abundance in Lake Mburo National Park is lower than in adjacent ranchlands. *Nature Conservation* 37, 123–131. DOI: 10.3897/natureconservation.37.35814
- ❖ 2019 **Nyamukuru A**, Grytnes JA, Tabuti JRS, Totland Ø. Unfenced Borders

- Cause Differences in Vegetation and Fauna Between Protected and Unprotected Areas in a Tropical Savanna. *Tropical Conservation Science* 12, 1–12. DOI: 10.1177/1940082919870371
- ❖ 2017 Whitney CW, Luedeling E, Tabuti JR, **Nyamukuru A**, Hensel O, Gebauer
J, Kehlenbeck K. Crop diversity in homegardens of southwest Uganda and its importance for rural livelihoods. *Agriculture and Human Values* 35, 399-424.
 - ❖ 2017 Kyarikunda M, **Nyamukuru A**, Mulindwa D, Tabuti, J.R. Agroforestry and
Management of Trees in Bunya County, Mayuge District, Uganda. *International Journal of Forestry Research*. 2017, Article ID 3046924, 9. <https://doi.org/10.1155/2017/3046924>
 - ❖ 2016 Majaliwa MJG, Muwanika V, Tabuti JR, Kizza L, Josephine N, Edward S,
Samuel M, **Nyamukuru A**. Farmers’ preferred trees carbon sequestration capacity in Lake Victoria’s rural landscapes. *African Journal of Rural Development (AFJRD)* 1, 305 – 315.
 - ❖ 2016 **Nyamukuru A**, Tabuti JR, Lamorde M, Kato B, Sekagya Y, Aduma PR.
Medicinal plants and traditional treatment practices used in the management of HIV/AIDS clients in Mpigi District, Uganda. *Journal of Herbal Medicine*. 7, 51-58. <http://dx.doi.org/10.1016/j.hermed.2016.10.001>
 - ❖ 2015 Olupot G, **Nyamukuru A**, Muhumuza D, Ssekuubwa E, Aganyira K, Muwanika VB, Esaete J, Tabuti JR. Soil carbon and nitrogen distribution under contrasting land cover types in Kibale National Park, Uganda. *International Journal of Research on Land-use Sustainability*. 2, 101-112
 - ❖ 2015 **Nyamukuru A**, Nabatanzi A, Mpiira S, Tabuti JRS. Locally preferred woody species and their management in selected sub-counties of Kiruhura and Arua districts, Uganda, *Ethnobotany Research and Applications*, 14:049-061
 - ❖ 2014 **Nyamukuru A**, Tabuti JRS, & Philip RA. Propagation and seedling establishment of selected multipurpose woody species of Uganda, *International Journal of Biodiversity Science, Ecosystem Services & Management*, 10, 270-274. DOI:10.1080/21513732.2014.953584
 - ❖ 2012 Paul Okiror, Jane Chono, **Antonia Nyamukuru**, Jeremiah S. Lwanga, Phionah Sasira, and Paul Diogo, “Variation in Woody Species Abundance and Distribution in and around Kibale National Park, Uganda,” *International Scholarly Research Notices Forestry*. Article ID 490461, 2012, 9. DOI:10.5402/2012/490461

REPORTS AND OTHER PUBLICATIONS

- Tabuti J. R.S., **A. Nyamukuru.**, J.M. Majaliwa., S. Mpiira and M. Kyarikunda. (2013). Selecting Indigenous Trees for Climate Mitigation in Africa. Funder, Rockefeller Foundation
- Tabuti J. R.S., **A. Nyamukuru.**, B. Kato and P.R. Aduma. (2012). Developing and Improving Access to Anti-HIV/AIDS Therapies, VicRes

REFEREES

<p>1. Dr. Paul K. Musali, Department of Geography, Geoinformatics and Climate Sciences P.O. Box 7060 Kampala – Uganda musalipaul@gmail.com Mob: 0772491083</p>	<p>2. Prof. John R.S Tabuti Makerere University Dept. Environmental Management P.O. Box 7060 Kampala – Uganda jtabuti@gmail.com Mob: 772960880</p>
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Curriculum Vitae

Name:	KIGOOLO Stephen
Expertise:	ZOOLOGIST / Wildlife Ecologist, Certified Environmental Practitioner
Date of Birth:	30 th May 1966
Country of Citizenship/Residence	Uganda
Experts contact information	E-mail: skigoolo@gmail.com Phone: +256-772-624-274

Education:

Period	Name of Awarding Institution	Qualification attained
October 1991 – July 1996	Makerere University	Master of Science (Zoology, Vertebrate Ecology & Wildlife Management)
October 1990 – July 1991	Makerere University	Postgraduate Diploma in Education (Chemistry and Biology)
October 1987- July 1990	Makerere University	Bachelor of Science (Hons) (Botany and Zoology)

Employment record relevant to the assignment:

Period	Employing organization and your title/position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
January 2005 to date	Different Consultancy Firms and Institutions Freelancing Registered Environmental Practitioner.	Uganda and Rwanda	Have participated in several ESIA studies as part of the Biological Team (ranging from Hydropower projects, Irrigation Projects, Road projects, Biogas projects, industrial projects); Environmental Audits, Wetland valuation, Local Government Environment and Social Safeguards Performance Assessments, Irrigation Schemes and water and sanitation projects. Activities have included: Stakeholder consultations, Fauna biodiversity inventories determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
June 2010 to December 2015	The Environmental Conservation Trust of Uganda (ECOTRUST) Program Coordinator	Uganda	<ul style="list-style-type: none"> Part of the program management team and primarily responsible for fostering the special projects

	<p>For Reference: Name: Gerald Kairu Position: Programme Manager Phone or mail: +256-414-320-971 or +256-776-446-892; geraldkairu@gmail.com, or gkairu@nilebasin.org</p>	<p>including the Payment for Ecosystem Services schemes and the Land Trust Program.</p> <ul style="list-style-type: none"> • Spearheading the design, development and implementation of Community Based Natural Resources Management Financing Schemes amongst communities as well as the land trust programme as part of climate change adaptation strategy. For example, spearheaded the piloting of the REDD scheme in Masindi District; spearheaded the design of the PES scheme in Mt. Elgon Region based on tree carbon sequestration, watershed and biodiversity conservation services. The scheme aims at providing incentives for building resilient to climate change vulnerability. • Provided technical assistance to farmers investing in sustainable land use practices and livelihood initiatives such as plant trees for food, fuel, forage and other purposes; by integrating tree planting into sustainable livelihood strategy. • Managed USAID's Small Grants Program for the Sustainable Tourism in the Albertine Rift (STAR) having subcontracted ECOTRUST to manage the fund on their behalf. • Developed land acquisition and conservation strategies and oversaw the development as well as implementation of management plans for the land under the TRUST. • Taking a lead in the development of forest-based enterprises and development of an incentive program to sustain management of Central forest reserves/communal forests in the area of Payment for Ecosystem Services (PES) • Creating strong links between Special Projects and other agencies involved in similar activities for sustainable natural resource management and environment protection.
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			<ul style="list-style-type: none"> • Ensuring environmental guidelines compliance; networking and collaborating with Governmental as well as Non-Government Organizations, Community Based Organizations and Civil Society. • Establishing mechanisms for fostering of ECOTRUSTS' Biodiversity Conservation and Sustainable Natural Resource Management Programs through developing new programming areas, strategic planning and writing fundraising proposals. • Prepared carbon sales agreements and coordinated their signing and implementation. • Developed and managed a database of all carbon farmers that have joined and participating in the carbon project <p>Compiling periodic project reports to donors and other partners.</p>
September 2007 to December 2008	<p>United Nations Office for Project Services (UNOPS), National Project Coordinator, For Reference: Name: Tom Waako Position: Program Officer Phone or mail: Tel: +256-772-602-433; twako@gmail.com,</p>	Uganda	<ul style="list-style-type: none"> • Supervised and implemented Nile Transboundary Environmental Action Project (NTEAP) activities in its five components namely: <ul style="list-style-type: none"> o Institutional Strengthening to Facilitate Regional Cooperation o Community-Level Land, Forest and Water Conservation o Environmental Education and Awareness o Wetlands and Biodiversity Conservation o Basin Wide Water Quality Monitoring • Provided appropriate technical guidance to the Regional Project Manager and the Regional Office based in Khartoum Sudan concerning NTEAP project implementation. • Organized national planning meetings, national stakeholder workshops, coordination meetings and working group meetings. • Facilitated stakeholder involvement in the project implementation and strengthening appropriate linkages between the project and stakeholders.

		<ul style="list-style-type: none"> • Produced timely technical and financial NTEAP Project reports. • Conducted advocacy and information related tasks for the project such as making appropriate interventions. • Prepared project progress reports, overviews and briefing notes on emerging issues for the Project Steering Committee and the Regional Project Manager • Prepared project documentation e.g. Project Implementation Agreements and correspondences on NTEAP project. • Controlled project performance, analyzed results and initiated corrective actions where necessary through regular monthly monitoring visits with project proponents. • Assisted project proponents to develop work plans, processed payments, disbursements and procurements through the ATLAS accounting system. • Prepared funds authorization requests, fund disbursement for goods and services in accordance with UNOPS regulations. • Managed US\$ 1,735,779 in grants and operational costs for the NTEAP Uganda Coordination Office for the period September 2007 to December 2009. • Participated in donor Project review meetings and NTEAP components working group meetings • Facilitated hire of consultants, supervision and ensuring quality production of consultancy reports. • Provided technical backstopping to Thirty-three (33) field projects that were being piloted under the Community-Level Land, Forest and Water Conservation. • Supervised wetland biodiversity inventory activities, Facilitated preparation of a Sio-Siteko Transboundary Wetland Management Plan as well a
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			<p>preparation of Wetland training materials for Primary, Secondary, Tertiary, Community and Policy makers.</p> <ul style="list-style-type: none"> • Supervised preparation of environmental Education training materials and posters. <p>Facilitated establishment of Ten (10) Transboundary Water Quality monitoring stations in Uganda.</p>
July 2006 to April 2007	<p>Institute of Environment and Natural Resources, Makerere University National Project Coordinator For Reference: Name: Prof. Frank Kansime Position: Director Phone or mail: +256772506520; fkansiime@gmail.com,</p>	Uganda	<ul style="list-style-type: none"> • Coordinated the planning and implementation of the UNDP GEF PDF B process activities for Botanical and Zoological Networks in Eastern Africa (BOZONET) Project at the National Level. • Acted as a spokesperson for BOZONET on behalf of the stakeholders. • Developed the National Project Document for BOZONET Project in Uganda. The document will fetch US\$1.4 million for the Institute of Environment and Natural Resources, Makerere University. • Provided appropriate guidance on technical issues regarding BOZONET to the Regional Coordinator and the Regional Secretariat based in Nairobi, Kenya. • Ensured regular and effective communication with partners and relevant stakeholders at all levels, including serving as a liaison person with all stakeholders including regional office in Nairobi (ICIPE) and UNDP. • Organized national planning meetings, seminars and national stakeholder workshops including overseeing events coordination and logistics. • Facilitated National stakeholder involvement in the project development and strengthened appropriate linkages between taxonomic experts & end users. • Produced timely technical and financial BOZONET Project reports.

			<ul style="list-style-type: none"> • Ensured quality production of consultancy reports by hired consultants. • Ensured timely disbursement and accountability of funds for BOZONET activities. <p>Worked with the BOZONET National Task Force (Steering Committee) in the identification of project partners and implementation of contract services including preparing draft ToRs.</p>
May 2004 to June 2006	<p><i>NatureUganda</i> Wetlands Officer For Reference: Name: Achilles Byaruhanga Position: Executive Director Phone or mail: +256772522727; Achilles.byaruhanga@gmail.com,</p>	Uganda	<ul style="list-style-type: none"> • Coordinated <i>NatureUganda's</i> Ramsar activities when Uganda was preparing to host the Ninth Conference of the Parties of Ramsar Convention. • Identified and proposed 11 wetland systems for designation as wetlands of International Importance (Ramsar Sites). • Documented and collated information on different wetlands in Uganda, which information is being used to justify wetlands for designation as Ramsar Sites. • Developed information and awareness materials on wetlands in Uganda for local and international consumption • Prepared site maps for the proposed Ramsar sites, including boundaries as required by Ramsar criteria, and outlined management prescriptions. The site maps were based on satellite imagery and existing data sets including analysis of land use and population distribution infrastructure. • Developed and implemented a programme aimed at awareness and sensitization of local communities in and around areas being proposed as Ramsar Sites • Developed documents and instruments (RIS) required for the designation process. • Assisted with the local consultations required at each wetland site for proposing the wetlands as Ramsar sites. This included stakeholder identification and local government

			<p>consultations through the Government's Wetlands Inspection Division.</p> <p>Lobbying local governments to endorse the proposals for the designation of wetlands as Ramsar Sites</p>
February 2002 to January 2003	<p>The World Conservation Union (IUCN) Monitoring and Evaluation Officer For Reference: Name: Dr. Sean White Position: Chief Technical Adviser Phone or mail: +254721383585; swhite07@gmail.com,</p>	Uganda	<ul style="list-style-type: none"> • Prepared and updated an Ecological Monitoring System for Mt. Elgon National Park in Uganda. • Developed and tested a community Resource use monitoring System for Mt. Elgon National Park Collaborative Management Agreements. • Developed and implemented a baseline data System for the Project sustainable development and community conservation components. • Conducted training sessions for the field extension workers on proper monitoring methods. This resulted in improved records keeping in the history of the project. • Led monitoring teams for monitoring project activities and harmonizing of wildlife and environment management activities of partner districts. • Documented and disseminated lessons learnt in the implementation of MECDP. • Assisted the IUCN Chief Technical Advisor and other Project partners to prepare quarterly and annual work plans and compile project technical reports. • Developed and implemented a projects vehicle and motorcycle monitoring systems. The system increased efficiency of the transport department, cutting the running costs by 40%. <p>Assisted Mbale, Sironko and Kapchorwa District Environment Officers in compiling village, parish and district environmental profiles</p>
March 1997 to January 2002	<p>Uganda Wildlife Society (UWS) Project Officer For Reference: Name: Prof. Mary Okwakol</p>	Uganda	<ul style="list-style-type: none"> • Led in the design, implementation and management of UWS projects • Coordinated policy research in the field of environment for purposes of

	Position: Chairperson Phone or mail:		compliance monitoring to environmental policy and advocacy <ul style="list-style-type: none"> • Developed working and briefing papers for projects • Reviewed and prepared comments on Environmental Impact Statements (EIS) for Environmental Impact Assessment (EIA) Reports submitted to UWS by NEMA. UWS had been chosen by NEMA to be a depository of Environmental Impact Assessments. For example on: <ul style="list-style-type: none"> o Karuma Falls HydroPower Project Environmental Impact Assessment, prepared for Norpak Power Ltd by Norplan AS, May 1999. o Bujagali Hydro Electric Power Project Environmental Impact Statement, prepared for AES Nile Power Ltd by WS Atkins International Ltd in association with Development Consultants International Ltd, 1999. o Vegetable Oil Development Project Environment Impact Assessment in Forest Reserves of Bugala Island, Kalangala District, prepared for BIDCO by Environment Management Consultants International Company Ltd (EMCI), 2001.
August 1997 – February 1999	Uganda Wildlife Society (UWS) Ag. Executive Secretary For Reference: Name: Prof. Mary Okwakol Position: Chairperson Phone or mail:	Uganda	<ul style="list-style-type: none"> • Wrote a Concept Paper for Uganda Wildlife Society out of which the Environment Accountability Project Proposal was developed in partnership with World Resource Institute (WRI). The proposal fetched US\$ 600,000 for Uganda Wildlife Society. • Wrote a project proposal and secured funding amounting to US\$ 21,400 from UNDP GEF SGP to meet the startup costs of the Darwin Publishing Unit based at Uganda Wildlife Society. The Unit publishes environmental materials and is now the major income earner for the Uganda Wildlife Society. • Wrote a Project Proposal and secured funding amounting to Ushs. 98,000,000/- from USAID – Grants

			<p>Management Program, Action Program for Environment for NatureWatch. NatureWatch was an environmental magazine for Uganda Wildlife Society; it used to be an insert in the New Vision newspaper every last Friday of the month.</p> <p>Initiated and took a leading role in networking with other NGOs.</p>
Environmental Impact Assessment, Environmental Audit, Wetland Economic Valuation and Local Government Performance Assessment Tasks Done			
<p>5th November – 17th December 2025</p>	<p>Promote Uganda (For the Office of the Prime Minister)</p> <p>Environment and Social Safeguards Expert</p> <p>Reference: Dr. Stephen Mayende, Telephone: +256704763953. Email: stepmayende@yahoo.co.uk</p>	<p>Uganda</p>	<p>Annual Local Government Performance Assessment. Local governments assessed included included districts, Cities and Municipalities of Buvuma DLG, Entebbe Municipality, Gomba DLG, Jinja City, Kira Municipality, Luuka DLG, Lyantonde DLG, Rakai DLG, Sembabule DLG and Wakiso DLG. Activities included: 1) Establishing whether activities identified in the Annual work plan for the District Environment Officer were implemented according to Plan; 2) Establishing whether the environmental, social, health and safety requirements and measures identified in the project ESMPs (For at least 3 projects) were adequately incorporated in the schedule of requirements and specifications of the bidding documents; 3) Establishing whether the mitigation measures in the project ESMPs were fully implemented; 4) Establishing whether an approved Stakeholder Engagement Plan for the previous FY 2023/24 was in place and was implemented; Establish the existence and functionality of the Grievance Redress Committees (GRC's) at project level and whether; a) Constituted as per the circular issued by MoGLSD in July 2023, b) Evidence that grievances are recorded, c) Evidence that the grievances that were received were acted upon, d) Evidence that the GRC activities are funded, f) Evidence that the community/workers have been sensitized about the existence of the GRC, and g) Evidence that the GRCs have been trained on their roles and responsibilities. 5) Ascertaining the existence and functionality of safe learning environment facilities in schools. At least 2 Primary schools and 1 secondary school where visited for</p>

			<p>verification. 6) Ascertaining whether protection measures were in place against any form of violence/abuse discrimination in schools. 7) Establishing whether training of School Management Committees (SMCs) and Boards of Governors (BoGs) on grievance management and stakeholder engagement was done. 8) Establishing whether the local governments conducted Violence Against Children training activities. 9) Establishing whether local governments put in place protection measures against any form of violence/abuse discrimination in at least three Health Centres III / Health Centre IV or District Hospitals. 10) Verifying whether the local governments conducted training and sensitization on measures to eliminate any form of violence/abuse and discrimination at health facilities. 11) Establishing whether the local government Health Office and Community Development Office have trained the Health Unit Management Committees (HUMC) on stakeholder engagement and grievance management and 12) Establish that the Health Unit Management Committee (HUMC) has been trained on stakeholder engagement and grievance management as per the circular on grievance management by MoGLSD.</p>
September to October, 2025.	<p>GESCH Consult Ltd and China Petroleum Pipeline (CPP).</p> <p>(For Government of Uganda through East African Crude Oil Pipeline (EACOP)).</p> <p>Fauna Ecologist</p> <p>Reference: Gloria Sibo Muhweezi Telephone: +256787007754) Email: sibomgloria@gmail.com; Alt. Email: gloria.sibo@geschconsult.com</p>	Uganda	<p>Pre-Construction Survey for East African Crude Oil Pipeline from KP239 (Lwengo) to KP298 (Mutukula). Activities involved: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
June 10 th – 15 th , 2025	<p>SAVIMAXX Limited (For Uganda Electricity Distribution Company Limited).</p> <p>Herpetologist</p>	Uganda	<p>Environment Audit for Nalubaale and Kiira Hydropower Stations, Jinja City, Uganda. Activities: Assessing compliance of Uganda Electricity Distribution Company Limited (UEDCL) with NEMA Environmental Impact Approval approval conditions, Environmental</p>

	<p>Reference: Samuel Vivian Matagi Telephone: +256703360679 Email: <savimaxxcompanylimited@gmail.com></p>		<p>regulations and guidelines, permits and licences, conducting biodiversity studies to determine the numbers and relationship of species within different ecosystems, Suggest indicators to monitor, especially in relation to plant operations, Stakeholder consultations, consideration of EIA baseline, date and issues raised in the previous environmental audit, environmental monitoring reports or inspections, identification of noncompliance, propose corrective actions and timeframe for implementing the corrective actions; and; identify and map their species habitats; determining the conservation status of species encountered, abundance estimation.</p>
<p>May 23rd – 30th, 2025</p>	<p>Air, Water and Earth (For Mukono District Local Government)</p> <p>Fauna Evaluation Expert</p> <p>Reference: Prof. James Kalema Telephone: +256772945963 Email: jamskalema@yahoo.com</p>	<p>Uganda</p>	<p>Economic Evaluation of Kasaala – Sezibwa Wetland System, Mukono District, Uganda. Activities: Identifying fauna supported by wetland; Identifying the biodiversity habitats supported by wetland, Conduct an inventory of Key fauna ecosystems including wetlands, forests and grasslands, determining the status of fauna highlighting the threatened species and conservation needs; economic value of direct and indirect services of wetland system and inspection of the wetland sites focusing on ecological function and biodiversity importance; and ecological assessment focusing on evaluation of fauna found in the wetlands, including their species, their numbers and conservation values.</p>
<p>April 2025 – July 2025</p>	<p>GESCH Consult Ltd and China Petroleum Pipeline (CPP).</p> <p>(For Government of Uganda through East African Crude Oil Pipeline (EACOP)).</p> <p>Fauna Ecologist</p> <p>Reference: Gloria Sibo Muhweezi Telephone: +256787007754) Email: sibomgloria@gmail.com; Alt. Email: gloria.sibo@geschconsult.com</p>	<p>Uganda</p>	<p>Pre-Construction Survey for East African Crude Oil Pipeline from KP0 (Hoima) to KP239 (Lwengo). Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
<p>January 2025</p>	<p>Strategic Sustainable Consult Ltd</p> <p>(For National Forest Authority /USAID/Uganda RTI Project)</p>	<p>Uganda</p>	<p>Comprehensive Environmental and Social Impact Assessment (ESIA) for the proposed Canopy Walk at Kaniyo–Pabidi Budongo Central Forest Reserve (CFR), Uganda, (Part of “Investing in Forests and Protected Areas</p>

	<p>Herpetofauna Ecologist</p> <p>Reference: Dr. Raymond Katebaka Telephone: +256782909816 Email: katebakaraymond@yahoo.com; Alt. Email: <raymond.katebaka@gmail.com></p>		<p>for Climate Smart Development (IFPA-CD Project”). Activities: Stakeholder consultations, Herpetofauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
<p>3rd November – 21st December 2024</p>	<p>Promote Uganda (For the Office of the Prime Minister)</p> <p>Environment and Social Safeguards Expert</p> <p>Reference: Dr. Stephen Mayende, Telephone: +256704763953. Email: stepmayende@yahoo.co.uk</p>	<p>Uganda</p>	<p>Annual Local Government Performance Assessment. Local governments assessed included districts, cities and municipalities of Lira City, Gulu City, Kitgum Municipality, Lira DLG, Gulu DLG, Kitgum DLG, Omoro DLG, Lamwo DLG, Pader DLG and Agago DLG. Activities included: 1) Establishing whether activities identified in the Annual workplan for the District Environment Officer were implemented according to Plan; 2) Establishing whether the environmental, social, health and safety requirements and measures identified in the project ESMPs (For at least 3 projects) were adequately incorporated in the schedule of requirements and specifications of the bidding documents; 3) Establishing whether the mitigation measures in the project ESMPs were fully implemented; 4) Establishing whether an approved Stakeholder Engagement Plan for the previous FY 2023/24 was in place and was implemented; Establish the existence and functionality of the Grievance Redress Committees (GRC’s) at project level and whether; a) Constituted as per the circular issued by MoGLSD in July 2023, b) Evidence that grievances are recorded, c) Evidence that the grievances that were received were acted upon, d) Evidence that the GRC activities are funded, f) Evidence that the community/workers have been sensitized about the existence of the GRC, and g) Evidence that the GRCs have been trained on their roles and responsibilities. 5) Ascertaining the existence and functionality of safe learning environment facilities in schools. At least 2 Primary schools and 1 secondary school where visited for verification. 6) Ascertaining whether protection measures were in place against any form of violence/abuse discrimination in schools. 7) Establishing whether training of</p>

			<p>School Management Committees (SMCs) and Boards of Governors (BoGs) on grievance management and stakeholder engagement was done. 8) Establishing whether the local governments conducted Violence Against Children training activities. 9) Establishing whether local governments put in place protection measures against any form of violence/abuse discrimination in at least three Health Centres III / Health Centre IV or District Hospitals. 10) Verifying whether the local governments conducted training and sensitization on measures to eliminate any form of violence/abuse and discrimination at health facilities. 11) Establishing whether the local government Health Office and Community Development Office have trained the Health Unit Management Committees (HUMC) on stakeholder engagement and grievance management and 12) Establish that the Health Unit Management Committee (HUMC) has been trained on stakeholder engagement and grievance management as per the circular on grievance management by MoGLSD.</p>
October 2024-January 2025	<p>JBN Consults and Planners Ltd (For Ministry of Works, Transport and Communications)</p> <p>Herpetofauna Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: nelsonomagor@gmail.com</p>	Uganda	<p>Updating the Environmental and Social Impact Assessment for the Construction of a 272 Km Standard Gauge Railway Malaba-Kampala Eastern Route Project. Activities: Stakeholder consultations, Herpetofauna biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
October, 2024	<p>Ramboll UK Limited and JBN Consults and Planners Ltd (For Uganda Investment Authority)</p> <p>Biodiversity Expert</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	<p>Environmental Audit of Kampala Industrial and Business Park Infrastructure Development Project. Activities: Establishing whether required documents including; Biodiversity off-set plan to offset permanent loss of habitat for critical habitat species, catchment management plan, preparation and implementation of a fish resource plan, invasive species management, nesting bird's management plan and wetland management plan or generally biodiversity action plan, management plan for Namanve and ensure</p>

			legal protection of the reserve area, were prepared as per the ESIA recommendations. Establish whether a Biodiversity monitoring program and relevant management plans were implemented. Conducting discussions with the relevant staff to understand how the contractor is ensuring no net loss of biodiversity. Reviewing of periodic reports on how contractor is ensuring no biodiversity net loss. Conducting field visits to observe how the management plans were being implemented. Conducting stakeholder consultations, and compiling audit report detailing different environmental issues identified & suggesting remedial mitigation measures.
July 2024	<p>JICA and Tenvicon Testing and Consulting (For Ministry of Water and Environment)</p> <p>Zoologist / Fauna Ecologist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>	Uganda (Bulambuli and Kween Districts)	Pre-Construction Environment and Social Impact Assessment for Atari Irrigation Scheme. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
August 2024	<p>Tenvicon Testing and Consulting (For National Forest Authority / USAID)</p> <p>Zoologist / Wildlife Ecologist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>	Uganda	Environmental and Social Impact Assessment (ESIA) for Budongo Infrastructure Project including Proposed Development at Royal Mile Eco Camp Site, Information Centre and Entrance. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures. Compiling biodiversity report.
June 2024	<p>Environmental Solutions Africa (ESA). Based in South Africa. (For DOTT Services Uganda Ltd)</p> <p>Zoologist / Biodiversity Expert</p> <p>Reference: Mr. Eden Wildy Telephone: +27 83 440 6707 Email: eden@environmentalsolutions.africa</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for Kitgum – Kidepo Road, 115.8km. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.

May – June 2024 (One Month and Half)	<p>Promote Uganda (For the Ministry of Finance and Economic Planning)</p> <p>Environmental Trainer and Mentor</p> <p>Reference: Dr. Stephen Mayende, Telephone: +256704763953. Email: stepmayende@yahoo.co.uk</p>	Uganda	Support Supervision and Mentorship on Environment and Social Safeguards in Local Governments. Local governments mentored included districts, cities and municipalities of Bukomansimbi, Kalangala, Kalungu, Kyotera, Lwengo, Lyantonde, Masaka and Rakai Districts; and Masaka City. Activities: 1) Training LGs on E&S tools using E&S Guidelines safeguards for Local Government; 2) Sensitive Local Governments (Technical and Non-Technical) staff and selected political Leaders on E&S; 3) Provide support supervision and mentoring on the implementation of E&S; and 4) Support the monitoring and reporting function on E&S.
February 2024	<p>Tenvicon Testing and Consulting (For USAID/Uganda – RTI Project)</p> <p>Wildlife Management Ecologist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>	Uganda	Development of: 1) Construction Wildlife Management Plan, 2) Operational Wildlife Management Plan, 3) Trail and Landscape maintenance Plan; 4) Invasive Species Control Plan; 5) Illegal Activity prevention program Plan, and 6) Regional Tourism Development Plan for Kalinzu Canopy walk at Kalinzu Central Forest Reserve. Activities: Stakeholder consultations, Identifying all the local ecosystems in KCFR; Suggesting strategies for minimizing negative impacts on wildlife habitat; Prevention of human – wildlife conflicts; Prevention of interruption of wildlife movement; Providing detailed Trail and landscape maintenance guide; Provide strategic guidelines for management and control of invasive plant species.
December 2023	<p>KOM Consult Ltd. (For Uganda National Roads Authority)</p> <p>Fauna Ecologist / Zoologist</p> <p>Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for Atiak-Parabek-Kitgum Road. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
November – December 2023 (One Months)	<p>Tenvicon Testing and Consulting (For Consolidated African Resources (U) Ltd)</p> <p>Fauna Ecologist / Specialist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>	Uganda	Environmental and Social Impact Assessment (ESIA) for proposed Orom Cross Graphite Project – Orom Mine, Kitgum District. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.

September, 2023	<p>KOM Consult Ltd. (For Uganda National Roads Authority)</p> <p>Fauna Ecologist / Zoologist</p> <p>Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for Manibe-Kulukuliti-Obongi-Adjumani Road, 138Km. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
August, 2023	<p>Tenvicon Testing and Consulting (For Rwenzori Rare Metals Limited)</p> <p>Fauna Ecologist / Specialist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>	Uganda	Update of Environmental and Social Impact Assessment (ESIA) for Proposed Mining Retention License RL00007 Under Makuutu Rare Earths Metal project. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
August, 2023	<p>JBN Consults and Planners Ltd (For Ministry of Water and Environment)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for the Construction of Amagoro Irrigation Scheme in Tororo District, Uganda. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
August 2023	<p>JBN Consults and Planners Ltd (For Ministry of Tourism Wildlife and Antiquities / Private Sector Foundation Uganda)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	Review and Update of Environmental and Social Impact Statement for the proposed construction and renovation of Tourism and Wildlife facilities at Uganda Wildlife Education Centre. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
July 2023	<p>JBN Consults and Planners Ltd (For Ministry of water and Environment)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for Aswa and Ayila Irrigation Schemes in Nwoya and Amuru Districts, Uganda. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
July 2023	<p>KOM Consult Ltd. (For Uganda National Roads Authority)</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for Kamuli-Kaliro-Pallisa Road 89 Km. Activities: Stakeholder

	<p>Fauna Ecologist / Zoologist</p> <p>Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com</p>		<p>consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
<p>Mid-March – 20th April 2023</p>	<p>JBN Consults and Planners Ltd (For Ministry of Tourism Wildlife and Antiquities / Private Sector Foundation Uganda)</p> <p>Wildlife Expert / Wildlife Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	<p>Baseline Environmental and Social Impact Assessment (ESIA) study for proposed construction of Office premises for the Uganda Wildlife Research and Training Institute, at Katwe Kabatoro, Kasese District. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
<p>February 2023</p>	<p>JBN Consults and Planners Ltd (For Uganda National Roads Authority)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	<p>Baseline Environmental and Social Impact Assessment (ESIA) study for the proposed construction of a Weigh Bridge along Tororo-Mbale-Soroti Road on the North-Eastern Road Corridor Asset Management Project (NERAMP) at 45+700km on the outskirts of Mbale City. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
<p>December 2022</p>	<p>BIMCO Consult (For Uganda National Roads Authority)</p> <p>Herpetofauna Ecologist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>	Uganda	<p>Environmental, Social, Health and Safety Audit for Busega-Mpigi Expressway Road Project. Activities: Desk study; stakeholder consultations; Herpetofauna audit to establish which herpetofauna species occur in the project area, abundance estimation, determining the conservation status of species encountered, determining how the construction activities affect the herpetofauna.</p>
<p>3rd November – 15th December 2022</p>	<p>Promote Uganda (For the Office of the Prime Minister)</p> <p>Environment and Social Safeguards Expert</p> <p>Reference: Dr. Stephen Mayende, Telephone: +256704763953. Email: stepmayende@yahoo.co.uk</p>	Uganda	<p>Annual Local Government Performance Assessment. Local governments assessed included included districts, Cities and Municipalities of Bukomansimbi, Kalangala, Kalungu, Kyotera, Lwengo, Lyantonde, Masaka, Mpigi, Rakai and Sembabule Districts. Activities included: 1) Establishing whether activities identified in the Annual workplan for the District Environment Officer were implemented according to Plan; 2) Establishing whether the environmental, social, health and safety requirements and</p>

		<p>measures identified in the project ESMPs (For at least 3 projects) were adequately incorporated in the schedule of requirements and specifications of the bidding documents; 3) Establishing whether the mitigation measures in the project ESMPs were fully implemented; 4) Establishing whether an approved Stakeholder Engagement Plan for the previous FY 2023/24 was in place and was implemented; Establish the existence and functionality of the Grievance Redress Committees (GRC's) at project level and whether; a) Constituted as per the circular issued by MoGLSD in July 2023, b) Evidence that grievances are recorded, c) Evidence that the grievances that were received were acted upon, d) Evidence that the GRC activities are funded, f) Evidence that the community/workers have been sensitized about the existence of the GRC, and g) Evidence that the GRCs have been trained on their roles and responsibilities. 5) Ascertaining the existence and functionality of safe learning environment facilities in schools. At least 2 Primary schools and 1 secondary school where visited for verification. 6) Ascertaining whether protection measures were in place against any form of violence/abuse discrimination in schools. 7) Establishing whether training of School Management Committees (SMCs) and Boards of Governors (BoGs) on grievance management and stakeholder engagement was done. 8) Establishing whether the local governments conducted Violence Against Children training activities. 9) Establishing whether local governments put in place protection measures against any form of violence/abuse discrimination in at least three Health Centres III / Health Centre IV or District Hospitals. 10) Verifying whether the local governments conducted training and sensitization on measures to eliminate any form of violence/abuse and discrimination at health facilities. 11) Establishing whether the local government Health Office and Community Development Office have trained the Health Unit Management Committees (HUMC) on stakeholder engagement and grievance</p>
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			management and 12) Establish that the Health Unit Management Committee (HUMC) has been trained on stakeholder engagement and grievance management as per the circular on grievance management by MoGLSD.
March – May 2022	<p>HEBOCO Consult (For National Oil Palm Project; Ministry of Agriculture, Animal Industry and Fisheries)</p> <p>Fauna Ecologist</p> <p>Reference: Mr. Abdul Munubi Telephone: +256776485230 Email: munubibob@yahoo.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) study for proposed establishment of Oil palm Plantations in Mayuge Hub. Activities: Stakeholder consultations, Fauna Biodiversity inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
February – April 2022	<p>Newplan Limited (For National Oil Palm Project; Ministry of Agriculture, Animal Industry and Fisheries)</p> <p>Herpetofauna and Mammal Biodiversity Specialist.</p> <p>Reference: Eng. Lawrence Omulen Telephone: +256772780000 Email: lawrence@newplangroup.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) study for proposed establishment of Oil palm plantations in Masaka Hub. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
February 2022	<p>JBN Consults and Planners Ltd (For Ministry of Water and Environment)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	Baseline Environmental and Social Impact Assessment (ESIA) for Five (5) Large Solar Powered Rural Growth Centre piped water supply systems and sanitation facilities for Igwaya, Kidera Bukizibu – Bumwena, Lugala and Kitega. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
December 2021 to February 2022	<p>Newplan Limited (For Ministry of Lands, Housing and Urban Development)</p> <p>Herpetofauna and Mammal Biodiversity Specialist.</p> <p>Reference: Eng. Lawrence Omulen Telephone: +256772780000 Email: lawrence@newplangroup.com</p>	Uganda	Baseline Assessment for preparation of a comprehensive storm water drainage needs studies and preparation of Environment and Social Impact Assessment (ESIA) for 10 new USMID-AF participating municipalities and Cities. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.

November-December 2021	<p>JBN Consults and Planners Ltd (For National Water and Sewerage Corporation)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	Baseline Environment and Social Impact Assessment for the proposed Adjumani water supply and Sanitation Project (Adjumani and Pakele Town Councils – Rural Growth Centres of Ciforo, Dzaipi and Refuge Settlement Camps and their hosting communities). Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
November 2021	<p>JBN Consults and Planners Ltd (For Ministry of Water and Environment)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	Baseline Environment and Social Impact Assessment for development of Water and Sanitation Infrastructure for Mutunda, Gaspa and Nyakabaale Rural Growth Centres located in Kiryandongo District Local Government. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
September, 2021	<p>KOM Consult Ltd. (For Uganda National Roads Authority)</p> <p>Fauna Ecologist / Zoologist</p> <p>Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com</p>	Uganda	Baseline Environment and Social Impact Assessment for Kumi-Kagwara Road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
September, 2021	<p>KOM Consult Ltd. (For Uganda National Roads Authority)</p> <p>Fauna Ecologist / Zoologist</p> <p>Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com</p>	Uganda	Environment and Social Impact Assessment (ESIA) for Karenga – Kabong Road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
June 2021	<p>Alliance Consult Ltd (For National Water and Sewerage Corporation / Ministry of Water and Environment)</p> <p>Herpetofauna and Mammal Specialist</p> <p>Reference: Prof. Kansiiime Frank Telephone: +256772506520 Email: <fkansiime@gmail.com></p>	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Kyenjojo – Katooke Towns Water and Sanitation System Contract no. MWE/WRKS/20-21/00001. Activities: Stakeholder consultations, mammal fauna inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.

June 2021	<p>Alliance Consult Ltd (For National Water and Sewerage Corporation / Ministry of Water and Environment)</p> <p>Herpetofauna and Mammal Specialist</p> <p>Reference: Prof. Kansime Frank Telephone: +256772506520 Email: <fkansiime@gmail.com></p>	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Bundibugyo Water and Sanitation System. Activities: Stakeholder consultations, mammal fauna inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
May 2021	<p>KOM Consult Ltd. (For Uganda National Roads Authority)</p> <p>Fauna Ecologist / Zoologist</p> <p>Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com</p>	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Bwondha-Mayuge-Iganga Road, and Associated Namayingo-Lugala Link Road and Bugiri-Nankoma Link Road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
May 2021	<p>GESCH Consult Ltd (For Uganda National Roads Authority).</p> <p>Fauna Ecologist</p> <p>Reference: Gloria Sibo Muhweezi Telephone: +256787007754) Email: sibomgloria@gmail.com; Alt. Email: gloria.sibo@geschconsult.com</p>	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Najjanankumbi-Busabala road, Associated Link Roads, Interchanges and U-Turns. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
April/May 2021	<p>JBN Consults and Planners Ltd (For Rwenzori Rare Metals Limited)</p> <p>Fauna Ecologist / Specialist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>	Uganda	Makuutu Rare Metal Project Baseline Environment and Social Impact Assessment (ESIA). Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
April 2021	<p>GESCH Consult Ltd (For Uganda National Roads Authority).</p> <p>Fauna Ecologist</p> <p>Reference: Gloria Sibo Muhweezi Telephone: +256787007754)</p>	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Matuga-Kasangati-Kira-Kyaliwajala Road and Associated Loops and Junctions. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.

	Email: Email: sibomgloria@gmail.com ; Alt. Email: gloria.sibo@geschconsult.com		
March 2021	KOM Consult Ltd. (For Uganda National Roads Authority) Fauna Ecologist / Zoologist Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Muko-Katuna and Muko-Kachwekano Roads. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
November 2020 to March 2021	JBN Consults and Planners Ltd (For Ministry of water and Environment) Fauna Expert / Ecologist Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com	Uganda	Additional Surveys and Assessments for Kabuyanda Irrigation Scheme on Biodiversity and Ecological Flow Management Plan. Irrigation for Climate Resilience Project. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
8th-13th February 2021.	JBN Consults and Planners Ltd (For National Water and Sewerage Corporation Ltd) Fauna Expert / Ecologist Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Water & Sanitation Infrastructure, South Western Cluster, Mbarara-Masaka Areas: Package 1 – Kagera Water Works (Isingiro Water Works). Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
January 2021	GESCH Consult Ltd (For Uganda National Roads Authority). Fauna Ecologist Reference: Gloria Sibo Muhweezi Telephone: +256787007754) Email: Email: sibomgloria@gmail.com ; Alt. Email: gloria.sibo@geschconsult.com	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Lira-Abim Road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
October 2020	Fauna Ecologist / Zoologist Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com	Uganda	Scoping Field visit Environment and Social Impact Assessment for Irrigation Schemes being planned for development in Northern Uganda (Imvepi Irrigation Scheme, Atiak Irrigation Scheme, Mucwini Irrigation scheme, Pager Irrigation Scheme, Pailyec

			Irrigation Scheme, Potika Irrigation Scheme, Purongo Irrigation Scheme and Lagoro Irrigation Scheme). Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures. Scoping Field visit Environment and Social Impact Assessment for Irrigation Schemes being planned for development in Northern Uganda
July/August 2020	KOM Consult Ltd. (For Uganda National Roads Authority) Fauna Ecologist / Zoologist Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Muhanga-Kebisonni-Rwashamaire Road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
February 2020	KOM Consult Ltd. (For Uganda National Roads Authority) Fauna Ecologist / Zoologist Reference: Dr. Paul Musali Telephone: +256772491083 Email: musalipaul@gmail.com	Uganda	Baseline Environment and Social Impact Assessment (ESIA) for Kyegegwa-Kabagole-Buremba-Kazo 82km road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
July – October, 2020	Aston Associates (For Uganda Wildlife Authority / USAID) Fauna Ecologist Reference: Mr. Dennis Kamoga Telephone: +256777520738 Email: denniskamoga@yahoo.com	Uganda	Baseline environmental and social impact assessment for the proposed rehabilitation of infrastructure for biodiversity in Kidepo Valley National Park. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
March/April, 2020	JBN Consults and Planners Ltd (For Uganda National Roads Authority) Fauna Expert / Ecologist Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com	Uganda	Baseline environmental and social impact assessment for north eastern road corridor asset management project lot 1 (Tororo, Mbale, Bukedea, Ngora, Kumi, Soroti Road - 150 km). Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
January – February 2020	JBN Consults and Planners Ltd (For Albertine Region Sustainable	Uganda	Baseline environment and social impact assessment for infrastructure development

	<p>Development Project)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Eng. Jamil Kusiima Telephone: +256704249020 Email: jamil.kusiima@gmail.com</p>		<p>projects (Markets, Landing Site and Fish Cage Farming in Hoima, Buliisa and Kikuube District. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
November 2019	<p>JBN Consults and Planners Ltd (For Uganda National Roads Authority)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	<p>Baseline environment and social impact assessment for Koboko-Yumbe-Moyo 105km Road. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
July 2019	<p>JBN Consults and Planners Ltd (For Uganda National Roads Authority)</p> <p>Fauna Expert / Ecologist</p> <p>Reference: Mr. Nelson Omagor Telephone: +256772458903 Email: : nelsonomagor@gmail.com</p>	Uganda	<p>Baseline Environment and Social Impact Assessment for Yumbe-Bidibidi, and Yumbe-Ure bridge roads. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
June 2019	<p>Aston Associates (For Uganda National Roads Authority)</p> <p>Fauna Ecologist</p> <p>Reference: Mr. Dennis Kamoga Telephone: +256777520738 Email: denniskamoga@yahoo.com</p>	Uganda	<p>Updating of the baseline environment and social impact assessment for Busega-Mpigi Express Highway and Associated Link Roads. Activities: Stakeholder consultations, fauna biodiversity inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
April 2019 – February 2020	<p>Total E&P Uganda Ltd (Through Biodiversity Solutions Ltd)</p> <p>Project Coordinator</p> <p>Reference: Mr. Samuel Mutebi Telephone: +256 775444031 Email: samuelmutebi001@gmail.com</p>	Uganda	<p>Baseline assessment of ranging patterns and populations estimates of vultures in Murchison Falls Conservation Area. One Year Consultancy. Activities: Analyzing selected vulture species ranging habits, collection of fecal samples and determining cortisol stress levels, observing behavior. Population estimation, and determining Environmental Impacts.</p>
April 2018 – November 2020	<p>Total E&P Uganda Ltd (Through Biodiversity Solutions Ltd)</p> <p>Project Coordinator</p> <p>Reference: Mr. Samuel Mutebi Telephone: +256 775444031 Email: samuelmutebi001@gmail.com</p>	Uganda	<p>Baseline assessment of ranging behaviors and stress levels of selected mammal species in Murchison Falls National Park. Activities: Analyzing selected mammal ranging, collection of fecal samples and determining cortisol stress levels, observing behavior. Population estimation, and determining Environmental Impacts.</p>

November 2018 – May 2019	<p>Total E&P Uganda Ltd (Through Biodiversity Solutions Ltd)</p> <p>Team Leader</p> <p>Reference: Mr. Samuel Mutebi Telephone: +256 775444031 Email: samuelmutebi001@gmail.com</p>	Uganda	Feasibility study for undertaking pre-emptive mitigation actions for the Tilenga and the East African Crude Oil Pipeline (EACOP) projects. Activities: Stakeholder consultations, conducting ground-truthing, field visits to environmental activities being implemented in the study area, assessing the best activities that will mitigate impacts, identifying would be patterns in implementing pre-emptive mitigation measures.
November, 2018	<p>Alliance Consult Ltd (For Uganda Ports Authority)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Prof. Kalema James Telephone: +256772945963 Email: jamskalema@yahoo.com</p>	Uganda	Updating of The Baseline Environment and Social Impact Assessment for Bukasa Inland Port Project. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
March, 2018	<p>Thom Consult Ltd (For Munyonyo Catholic Church, Mutundwe Parish, Wakiso District)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Sheba Ndagire Telephone: +256789354618 Email: <shndagire@gmail.com></p>	Uganda	Environment and Social Impact Assessment For Mutudwe Biogas Project. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
March, 2018	<p>JBN Consults and Planners Ltd (For Wealth Creation, Kamwokya)</p> <p>Herpetofauna and Mammal Biodiversity Specialist</p> <p>Reference: Mr. Moses Basiima Telephone: +256772459792. Email: mbasoma1@gmail.com</p>	Uganda	Environment And Social Impact Assessment For Safa Investments Mixed Farm Ltd Project. Activities: Stakeholder consultations, Herpetofauna and mammal inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
November, 2017	<p>Newplan Limited (For Nile Equatorial Lakes Strategic Action Plan (NELSAP))</p> <p>Herpetofauna and Mammal Biodiversity Specialist.</p> <p>Reference: Eng. Lawrence Omulen Telephone: +256772780000 Email: lawrence@newplangroup.com</p>	Uganda	Environment And Social Impact Assessment For Kabuyanda Multipurpose Water Resources Development Project. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.
November, 2017	<p>BIMCO Consult (For Tibet Hima Mining Company Limited)</p>	Uganda	Environmental Audit for Kilembe Mines. Activities: Stakeholder consultations, Herpetofauna inventory, determining the

	<p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>		<p>conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
August / September, 2017	<p>BIMCO Consult (For Hima Cement Industry Limited)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>	Uganda	<p>Environmental Audit for Hima Cement Industry Limited Limestone Quarry Sites. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & suggesting remedial mitigation measures.</p>
August, 2017	<p>UNDP</p> <p>(For Ministry of Lands, Housing and Urban Development through the Albertine Region Sustainable Development Project)</p> <p>Reference: Okello ??? Telephone: +256xxxxx Email: xxxxx</p>	Uganda	<p>Environment And Social Impact Assessment for Albertine Region Sustainable Development Project, Batch 1 Roads in Buliisa And Hoima District Local Government, Ministry Of Lands Housing And Urban Development. Activities: Desk Study, Stakeholder Consultations, Detailed assessment of reptiles and amphibians along the project area, including herpetofauna inventory to establish which herpetofauna species occur in the project areas, abundance estimation, determining the conservation status of species encountered, identify potential impacts on amphibian and reptile fauna and propose mitigation measures.</p>
March - July 2017	<p>Uganda National Roads Authority (UNRA)</p> <p>Telephone: +256312233307</p>	Uganda	<p>Environment And Social Impact Assessment for The Critical Oil Roads Including: Buhimba-Kakumiro Road; Kiziranfumbi-Kabaale Road; Hohwa-Kyarushesha Road, Kaseeta-Bugoma Road; And Karugutu-Ntoroko Road. Activities: Desk Study, Stakeholder Consultations, Detailed assessment of reptiles and amphibians along the project area, including herpetofauna inventory to establish which herpetofauna species occur in the project areas, abundance estimation, determining the conservation status of species encountered, identify potential impacts on amphibian and reptile fauna and propose mitigation measures.</p>
July 2017	<p>BIMCO Consult (For Uganda Electricity Distribution Company Limited)</p>	Uganda	<p>Environment And Social Impact Assessment for The Proposed Electricity Distribution Grids For (1) Ngetta-Ayala-Alito-Ogur; (2) Ogur-Apala; (3) Apala-Aloi; (4) Aloi-Adwari;</p>

	<p>Herpetofauna and Mammal Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>		<p>(5) Adwari-Patong; (6) Dokolo-Kopoto-Aceng-Alwa; (7) Dokolo Agwata; (8) Otuboi-Apara-Atiriri-Katine; (9) Dokolo-Katingi-Alwa-Kaberamaido, And (10) Dokolo-Kangai Distribution Lines. Activities: Desk study; stakeholder consultations; Herpetofauna and mammal inventory to establish which herpetofauna and mammal species occur in the project area, abundance estimation, determining the conservation status of species encountered, determining how the distribution line construction works will affect the mammal and herpetofauna, proposing mitigation measures and developing an environment management plan.</p>
June 2017	<p>Ramboll Environs Inc, South Africa and Newplan Limited Rwanda (Republic of Rwanda)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Eng. Lawrence Omulen Telephone: +256772780000 Email: lawrence@newplangroup.com</p>	Rwanda	<p>Baseline Environment and Social Impact Assessment For The New Bugesera International Airport, And Associated Facilities, Access Road And Water Pipeline, Rwanda. Activities: Stakeholder consultations, Herpetofauna inventory to establish which herpetofauna species occur in the project area, population estimation, determining the conservation status of species encountered Environmental Impact identification on the herpetofauna diversity & Suggesting mitigation measures.</p>
May 2017	<p>BIMCO Consult (For ZIBA Uganda Ltd)</p> <p>Herpetofauna and Mammal Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>	Uganda	<p>Update Of Environment And Social Impact Assessment For Kyambura Small Hydropower Electric Power Plant (KSHEPP). Activities: Stakeholder Consultations, Mammal and Herpetofauna inventory to establish which herpetofauna and mammal species occur in the project area, abundance estimation, determining the conservation status of species encountered, Environmental Impact identification & Suggesting mitigation measures.</p>
August 2016	<p>BIMCO Consult (For Hima Cement Industry Limited)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>	Uganda	<p>Environmental Audit For Hima Cement Industry Limited Limestone Quarry Sites. Activities: Stakeholder consultations, Herpetofauna inventory determining the conservation status of species encountered, abundance estimation, Environmental Impact identification & Suggesting remedial mitigation measures.</p>
June 2016	<p>Alliance Consult Ltd (For National Water and Sewerage Corporation)</p>	Uganda	<p>Environment And Social Impact Assessment For The Proposed National Water And Sewerage Corporation (NW&SC) East Kampala Water Development Project.</p>

	<p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Prof. Kalema James Telephone: +256772945963 Email: jamskalema@yahoo.com</p>		<p>Activities: Desk Study, stakeholder consultations, Herpetofauna inventory, population estimation, determining the conservation status of species encountered, impact identification, proposing mitigation measures.</p>
May 2016	<p>BIMCO Consult (For Uganda Electricity Distribution Company Limited)</p> <p>Herpetofauna and Mammal Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>	Uganda	<p>Environment And Social Impact Assessment For Wandu-Yumbe-Moyo Proposed Electricity Distribution Line For West Nile Rural Electrification Service Territory. Activities: Desk study; consultations; Herpetofauna inventory, abundance estimation, determining the conservation status of species encountered, determining how the distribution line construction works will affect the herpetofauna, proposing mitigation measures.</p>
February 2016	<p>BIMCO Consult (For Tibet Hima Mining Company Limited)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug</p>	Uganda	<p>Environment And Social Impact Assessment For Mubuku I Hydropower Project Phase II. Activities: Desk study; stakeholder consultations; Herpetofauna inventory to establish which herpetofauna species are present, determining the conservation status of species encountered, population estimation, determining how the extension construction works will affect the herpetofauna, proposing mitigation measures.</p>
February 2016	<p>Urban Research Consult Ltd (For Fichtner and Uganda Electricity Generation Company Ltd)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Dr. Charles Koojo Telephone: +256772522707 Email: koojocharles@yahoo.co.uk</p>	Uganda	<p>Environment and Social Impact Assessment For The Proposed Muzizi Hydropower Project. Activities: Desk study; stakeholder consultations; Herpetofauna inventory to establish which herpetofauna species are present, determining the conservation status of species encountered, population estimation, determining how the construction works will affect the herpetofauna, proposing mitigation measures.</p>
March 2015	<p>Air Water and Earth (For Uganda Electricity Distribution Company Limited)</p> <p>Herpetofauna Biodiversity Specialist</p> <p>Reference: Dr. Isa Kabenge Telephone: +256772377172 Email: <isakabenge@gmail.com></p>	Uganda	<p>Environment And Social Impact Assessment For The Proposed Masaka – Mbarara Hydro-Power Transmission Line. Activities: Desk study; stakeholder consultations; Herpetofauna inventory to establish which herpetofauna species are present, determining the conservation status of species encountered, population estimation, determining how the transmission line construction works will affect the herpetofauna, proposing mitigation activities.</p>

May 2014	BIMCO Consult (For Hima Cement Industry Limited) Herpetofauna Biodiversity Specialist Reference: Moses Otim Telephone: +256776200684 Email: motim@bimco.co.ug	Uganda	Environmental Audit For Hima Cement Industry Limited Limestone Quarry Sites. Activities: Stakeholder consultations, Herpetofauna and mammal inventory, determining the conservation status of species encountered, abundance estimation, Environmental Impact identification on the herpetofauna and Mammal diversity, & developing mitigation measures.
June - July 2011	Air Water and Earth (For Uganda Electricity Distribution Company Limited) Herpetofauna Biodiversity Specialist Reference: Dr. Isa Kabenge Telephone: +256772377172 Email: < isakabenge@gmail.com >	Uganda	Environment And Social Impact Assessment For Bujagali Hydro Power Transmission Line. Activities: Desk study; stakeholder consultations; Herpetofauna inventory, determining the conservation status of species encountered, population estimation, determining how the transmission line construction works will affect the herpetofauna, proposing mitigation activities.
June 2005 to April 2007	BIOTA (Biodiversity Monitoring Transect Analysis in Africa) Mainz University, Germany Herpetologist (Amphibian Specilaist) Reference: Dr. Stefan Lotters Telephone: +49 xxxxx Email: xxxx	Uganda	Investigating The Impact Of Climate Change, Measuring And Monitor Amphibian Diversity Change In Mabira and Budongo Forest Reserves. Activities: Investigation species presence, conducting population estimation, Recording temperature and weather data; analyzing and writing technical reports.
July-October, 2005	Mainz University, Germany Team Leader / Amphibian Specilaist. Reference: Dr. Stefan Lotters Telephone: +49 xxxxx Email: xxxx	Uganda	Surveyed The Amphibian Biodiversity of The Mount Rwenzori Region July-October, 2005. Activities: Amphibian biodiversity Inventory, inventory implementation planning, logistics planning, etc.
August 1996 to November 2001	Department of Biology, School of Biological Sciences, Bristol University Research Fellow and Team Leader. Reference: Prof. Richard Tinsley, British Telephone: xxxx Email: xxxx	Uganda	Investigating The Biodiversity Of The African Clawed Frog Genus Xenopus In Uganda. Activities: In charge of Survey planning and implementation, organizing logistics, and inventorying.
May / June 1996	Makerere University, Zoology Department. (For Ministry of Water and Environment / The World Conservation Union (IUCN)	Uganda	Environment And Social Impact Assessment Of The Itek-Okile-Agweny Rice Scheme. Activities: Desk study; stakeholder consultations; Herpetofauna inventory, determining the conservation status of

	Herpetofauna Biodiversity Specialist Reference: Dr. Julius Arinaitwe Telephone: +256789582645 Email: xxxx		species encountered, population estimation, determining how the construction works will affect the herpetofauna, proposing mitigation measures.
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Membership in Professional Associations and Publications:

S/N	Name of Association	Qualification/Grade	Period of Attainment
1	Uganda Association of Impact Assessment	EIA Certified Member	7 years
2	Species Survival Commission of the World Conservation Union (IUCN-SSC)	Member	Over 20 years
3	Declining Amphibian Populations Task Force (DAPTF)	Member	Over 20 years
4	African Working Group on Amphibians and Reptiles	Member	10 years
5	Partners of Amphibian and Reptiles Conservation Group	Member	13 years
6	NatureUganda Herpetology Working Group	Member	20 years

S/N	Name of Publication	Publication date
1.	Herpetofaunal diversity and community structure in the Murchison Falls – Albert Delta Ramsar Site, Uganda. <i>European Journal of Ecology</i> 6(2):1-17. (Authors: Mathias Behangana, Richard Magala, Raymond Katumba, David Ochanda, Stephen Kigoolo, Samuel Mutebi, Daniele Dendi, Luca Luiselli, and Daniel F. Hughes)	2020
2.	Ontogenetic habitat use and seasonal activity of Nile crocodiles (<i>Crocodylus niloticus</i>) in the Lake Albert delta, East Africa, <i>Journal of Great Lakes Research</i> , Volume 46, Issue 6, 2020, Pages 1776-1782. (Authors: Mathias Behangana, Richard Magala, Raymond Katumba, David Ochanda, Stephen Kigoolo, Samuel Mutebi, Daniele Dendi, Luca Luiselli, and Daniel F. Hughes).	2020
3.	The stream-dwelling larva of the Rwenzori River Frog, <i>Amietia ruwenzorica</i> , its buccal cavity and pathology of chytridiomycosis. <i>Zootaxa</i> , 3400(1), 43–57. https://doi.org/10.11646/zootaxa.3400.1.3 . (Authors: Viertel, B., Veith, M., Schick, S., Channing, A., Kigoolo, S., Baeza-Urrea, O., Sinsch, U., & Lötters, S.).	2012
4.	A review of the Amphibian Diversity in the Rwenzori Mountains, an Eastern Afrotropical Biodiversity Hotspot. <i>Herpetotropicos</i> . (Authors: Melanie T. M. Siow, Caroline Aguti, Alan Channing, Stephen Kigoolo, Enrique La Marca, Susanne Schick, Michael Veith, Bruno Viertel, Katharina C. Wollenberg, Beryl A. Bwong and Stefan Lotters)	2010
5.	A method for Community Based Assessment of Forest Condition and Sustainability of Forest Resource Harvesting. IUCN-MECDP Technical Report No. 29. (Authors: White, S. & Kigoolo, S.)	2003
6.	The Herpetofauna of Olweny Wetland. In Arinaitwe, J (Edit). 1999. Impact Study of Okile-Olweny Wetland Rice Scheme. A report to the Ministry of Agriculture, Animal Industry & Fisheries. (Author: Kigoolo, S.)	1996
7.	Polyploidy and parasitic infection in <i>Xenopus</i> Species from Western Uganda.	1998

CV for Mr. Richard Atugonza (Physical Environment (Air Quality and Noise/ Occupational Safety and Health Expert)

Position Title and No.	Environment Occupational Safety and Health Specialist
Name of Expert:	Richard Atugonza
Date of Birth:	28 September 1989
Country of Citizenship/Residence:	Uganda

Key Qualifications and Experience:

Atugonza is a NEMA certified environmental (EIA) and (EA) practitioner in Uganda. He is knowledgeable in national and regional environmental and social safeguards policies, regulations and operational policies those of donor agencies including World Bank/IFC, JICA, AfDB and European Investment Bank Exim Bank, JICA, French Development Agency and USAID. He has also worked on a number of World Bank related projects including “Program-for-Results (PforR)” project, the first of its kind in Uganda and Africa, aimed to develop environmental and social assessment (ESSA) framework for Uganda Support to Municipal Infrastructure Development Project (USMID).

During my tenure as a Freelance Environmental Consultant, I worked on several projects in the oil and gas sector in the Albertine Graben and other infrastructure projects in sectors such as energy, agriculture, roads and bridges, power dams, air ports, including preparation of Resettlement Action Plans (RAPs) and Environmental Impact Assessments (EIAs) and Environmental Social Health and Safety Compliance Audits, Environmental Monitoring, GIS and Remote Sensing, Land Use Mapping, Occupational Health and Safety, Gender Mainstreaming and QMS and EMS Auditing Process. He is also conversant with development of Resettlement Policy Frameworks, Environmental and Several EIAs for exploration; EIA for Kasamene -3 appraisal well in Buliisa District, Uganda Tullow Uganda Operations PTY LTD: The development of Kingfisher oil field in Hoima Kaiso Tonya under CNOOC Uganda, Environmental and social impact assessment reports of proposed Nzizi-3 and Kigogole-5 Appraisal Wells in Hoima & Buliisa Districts respectively, Uganda: under Tullow Uganda Operations PTY LTD. And other sectors like Audits and ESIA for Roads (, Railway Line Transport Network, Powerline and Transmission line construction, Hydro Power Dams, Health, Agriculture, and Airports.

Consequently, I have developed expertise in addressing issues covered by Environmental and social safeguards policies and procedures, USAID’s 22 CFR 216 Agency Environmental Procedures, participated in project disclosures, community sensitizations, social risk analysis, stakeholder consultation, and socio-environmental impact analyses and environmental monitoring, preparation of the initial environmental examination under Northern Karamoja Growth, Health and Governance (GHG) Program, formerly Sustainable Transformation in Agriculture and Nutrition (SUSTAIN) Mercy Corps (USAID Funded Projects), preparation of the Pesticide Evaluation Report and Safe User Action Plans (PERSUAP). I have experience in: establishing baseline environmental, occupational health and safety, socio-economic conditions, socio-economic impact analysis, developing mitigation recommendations for socio-economic impacts, action plans,

environmental and social management plans, monitoring plans and organizing and conducting stakeholder consultation meetings and undertaken training in World Bank Safeguard Policies.

Education:

- M.Sc. Master of Science Environmental Science & Natural Resources Makerere University, Kampala, Uganda, 2017
- M.Sc. Master of Public Health Makerere University (MakSPH) (Candidate)
- Bachelor of Environmental Management, Makerere University, Kampala, Uganda, 2013
- International Diploma in Occupational Safety and Health NEBOSH (Candidate)
- International Diploma in Toxicology (Outdoor Air Quality, Health and Air Quality Index) University of British Columbia. 2019.

Other Training

- Certificate as a Lead Auditor / Assessor for QMS ISO Standards,
- Environment and Climate Change, GIS application, Oil & Gas, Public Health, Participatory Rural Appraisal and Community Action Planning, occupational health & safety and First Aid.
- Training in Land use management and Planning held in Makerere University.
- ISO 9001: 2008 Internal Training for Lead Auditors held by Bureau Varitus France.
- ISO 14001: 2008 Internal Training for Lead Auditors held by Bureau Varitus France.
- ISO 9001, 14001 & 45001 (IMS) Lead Auditor Training for Integrated Quality Management Systems and Environmental Management Systems held by Bureau Varitus.
- Certificate in Environment and Climate Change from LAURIER University of Canada
- Certificate Data Management & Control and Geographical Information Systems conducted by Professor. Tonny Oyana from the University of Tennessee.
- Certificate in OHSAS 18001: 2007 held by Bureau Varitus France.
- Certificate in Advanced Geographical Information Systems held Makerere University
- Wibenar on Air pollution and Air pollution health impacts in Uganda organised by the Lung Institute together with the US Embassy & Kampala Capital City Authority (KCCA
- Certificate in ISO 9001: 20015 Training in implementation of Quality Management Systems held by Uganda National Bureau Standards
- Wibenar on Outdoor Air Quality and Health and the Air Quality Index organised by **University of British Columbia.**
- Certificate in Outdoor Air Quality, Health and Air Quality Index at the **University of British Columbia.**
- Wibenar on Outdoor Air Quality and Health and the Air Quality Index and COVID-19 Pandemic Management organised by **World Health Organisation in May 2020.**
- Wibenar on Outdoor Air Quality and Health and the Air Quality Index organised by **World Health Organisation in December 2020.**

Employment record relevant to the assignment:

Period	Employing organization and your title / position. Contact info for references	Country	Summary of activities performed relevant to the Assignment
Since 2016	JBN Consults and Planners Ltd. Senior Consultant Environmental Services/ Air Quality/Noise and Vibration Expert	Uganda	Mr. Atugonza had substantial involvement in a number of studies in the oil and gas sector in the Albertine Graben including: <ul style="list-style-type: none"> • environmental and social impact assessments, • environmental compliance audits, • environmental monitoring, • GIS and remote sensing, • land use mapping, • occupational health and safety,
2012-2015	Freelance - Environmental Consultant	Uganda	
2013-2014	Makerere University	Uganda	

Period	Employing organization and your title / position. Contact info for references	Country	Summary of activities performed relevant to the Assignment
	Graduate Research Assistant		<ul style="list-style-type: none"> environmental and social assessments, environmental compliance, sampling of wastewater treatment and field sampling activities. field Assessments for Air Quality noise and Vibration assess the compliance of the Contractor with General Specifications on Occupational Health and Safety; assess how the health, safety and security issues related to community wellbeing are being managed on the project; Resettlement action plans, gender mainstreaming, QMS, and EMS Auditing Process among others.

Membership in Professional Associations and Publications:/.

- Certified Environmental Impact Assessor (NEMA-Uganda)
- Certified Environmental Auditor (NEMA-Uganda)
- Certified Lead Auditor for Quality Management Systems (Bureau Varitus France)
- Member – Uganda Association for Impact Assessment (UAIA)
- Member of Climate Change Action Network Uganda (CAN-U)
- Member of Uganda Mountain Club

Language Skills: (Working knowledge: Native, Excellent or Good)

	Speaking	Reading	Writing
English	Excellent	excellent	excellent
Luganda	Excellent	good	good
Runyakitara	Excellent	excellent	excellent
Kiswahili	Fair	fair	fair

Adequacy for the Assignment

Detailed tasks assigned on Consultant's Team of Experts:	<p>Reference to prior work / assignments that best illustrates capability to handle the assigned tasks</p> <p>Name of assignment: Bankable feasibility studies including environment and social impact assessment and resettlement action plan for the Proposed Sisi (7.41MW) Hydropower Plant in Bulambuli District Uganda in accordance with IFC Performance standards and national guidelines.</p> <p>Year: November 2017</p> <p>Location: Bulambuli District</p> <p>Main project features: To undertake baseline investigations and to undertake an acceptable ESIA and RAP reports that meets Uganda legal requirements and the IFC Environmental and Social Performance standards.</p> <p>Position held: Environmental/ OSH Specialist</p> <p>Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA, RAP and ESMP Reports and field measurements like air quality noise, vibration assessments and</p>
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Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

write up of a Final ESIA, RAP and ESMP Reports that meets IFC Environmental
and Social Performance standards.

Name of assignment: Bankable feasibility studies including environment and
social impact assessment and resettlement action plan for the Proposed Simu
(9.9MW) Hydropower Plant in Bulambuli District Uganda in accordance with IFC
Performance standards and national guidelines.

Year: November 2017

Location: Bulambuli District

Main project features: To undertake baseline investigations and to
undertake an acceptable ESIA and RAP reports that meets Uganda legal
requirements and the IFC Environmental and Social Performance standards.

Position held: Environmental/ OSH Specialist

Activities performed: The tasks included write-up of the Inception Report,
compilation and quality assurance of the Draft and Final ESIA, RAP and ESMP
Reports and field measurements like air quality noise, vibration assessments and
write up of a Final ESIA, RAP and ESMP Reports that meets IFC Environmental
and Social Performance standards.

Name of assignment: Update of the Environment and social impact assessment
for Kikagati HPP and ESIA for access roads, workers camp in accordance to IFC
Performance Standard

Year: November 2016

Location: Mitooma District

Main project features: To undertake baseline investigations and to
undertake an acceptable ESIA report that meets Uganda legal requirements and
the IFC Environmental and Social Performance standards.

Position held: Environmental/ OSH Specialist

Activities performed: The tasks included write-up of the Inception Report,
compilation and quality assurance of the Draft and Final ESIA and ESMP Reports
and field measurements like air quality noise, vibration assessments and write up
of a Final ESIA and ESMP Reports that meets IFC Environmental and Social
Performance standards.

Name of assignment: Environmental and Social Impact Assessment to
IFC Performance Standards of Proposed 45MW Kinyara Co-generation Plant
Expansion in Masindi Western Uganda

Year: November 2016

Location: Masindi District

Main project features: To undertake baseline investigations and to
undertake an acceptable ESIA report that meets Uganda legal requirements and
the IFC Environmental and Social Performance standards.

Position held: Environmental/ OSH Specialist

Activities performed: The tasks included write-up of the Inception Report,
compilation and quality assurance of the Draft and Final ESIA and ESMP Reports
and field measurements like air quality noise, vibration assessments and write up
of a Final ESIA and ESMP Reports that meets IFC Environmental and Social
Performance standards.

Name of assignment: Environment and social impact assessment for Kapterol-
Mbale 132 kV Transmission Line and Substations in Mbale Eastern Uganda

Year: November 2017

Location: Mbale District

Main project features: To undertake baseline investigations and to
undertake an acceptable ESIA report that meets Uganda legal requirements and
the IFC Environmental and Social Performance standards.

Position held: Environmental/ OSH Specialist

Activities performed: The tasks included write-up of the Inception Report,
compilation and quality assurance of the Draft and Final ESIA and ESMP Reports

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle the assigned tasks
and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets IFC Environmental and Social Performance standards.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for Garowe Hospital Bridge, Garowe Municipality in accordance with WB ESS and national guidelines.

Year: April 2021

Location: Garowe Municipality Puntland State Somalia.

Client: Garowe Municipality PIU

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Puntland State legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets World Bank Environmental and Social Standards ESS.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for Consultancy Services for Feasibility Study and Detailed Engineering Design of Kantuna-Muko (66.6 km) and Muko- Kachwekano- Kamuganguzi (38km) in South-Western Uganda in accordance with WB ESS and national guidelines.

Year: 2021

Location: Kabale-Kisoro Districts Uganda.

Client: Uganda National Roads Authority

Position held: OSH Specialist, Physical Environment Expert

Main project activities:

The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets World Bank Environmental and Social Standards ESS.

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for Consultancy Services for Feasibility Study and Detailed Engineering Design of Muhanga-Kisizi-Rwashamaire road (78.8km)-Western Uganda in accordance with WB ESS and national guidelines.

Year: 2020

Location: Kabale-Rukungiri Districts Uganda.

Client: Uganda National Roads Authority

Position held: Physical Environment Expert

Main project activities:

The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets World Bank Environmental and Social Standards ESS.

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for Consultancy Services for Feasibility Study and Detailed Engineering Design of Kazo-Bulemba-Kabagolo-Kyegegwa road (110km)-Western Uganda in accordance with WB ESS and national guidelines.

Year: 2020

Location: Kazo-Kyegegwa Districts Uganda.

Client: Uganda National Roads Authority

Position held: Physical Environment Expert

Main project activities:

The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets World Bank Environmental and Social Standards ESS.

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for Consultancy Services for Feasibility Study and Detailed Engineering Design of 5 Selected National Roads Lot 1: Kumi-Ngora-Serere-Kagwara (95 km) in Eastern Uganda in accordance with WB ESS and national guidelines.

Year: 2021

Location: Kumi-Ngora-Serere Districts Uganda.

Client: Uganda National Roads Authority

Position held: Physical Environment Expert

Main project activities:

The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets World Bank Environmental and Social Standards ESS.

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Contractor's Environment Specialist, Design and construction supervision of Irajji Bridge in Adjumani, Northern Uganda. Funded by Government of Uganda in accordance with WB ESS and national guidelines.

Year: 2020

Location: Adjumani District Uganda.

Client: Adjumani District Local Government

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

Position held: OSH Specialist

Main project activities:

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Management of instructions issued from time to time by the Resident Engineer and/or the Resident Engineer's Environmental Specialist;
- Monitoring of the Contractor's activities and preparation of a Monthly Environment Report;
- Advise and closely work with the Contractor's Health and Safety Officer on mainstreaming issues of gender and HIV/AIDS into the project;
- Preparation of the Final Environment Management Report upon project completion.
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Contractor's Environment Specialist,
Design and Build of 5 selected Bridges in Kabarole District; Dunga,
Mahoma, Mpanga, Nabuswa (Nyabuswa) and Perepa Bridges
along Bukuku-Rubona Road Funded by Government of Uganda

Year: 2016-2018

Location: Kabarole District Uganda.

Client: Uganda National Roads Authority (UNRA)

Position held: Environmental Specialist

Main project activities:

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Management of instructions issued from time to time by the Resident Engineer and/or the Resident Engineer's Environmental Specialist;
- Monitoring of the Contractor's activities and preparation of a Monthly Environment Report;
- Advise and closely work with the Contractor's Health and Safety Officer on mainstreaming issues of gender and HIV/AIDS into the project;
- Preparation of the Final Environment Management Report upon project completion.
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Contractor's Environment Specialist,
Design and Build of Strategic Bridges on the National Network
Lot 1: Design and Build of Strategic Bridges: Siroko Bridge on
Mbale-Siroko Road; Chololo on Chosan-Amudat Road and
Kibimba on Kampala-Uganda/Kenya Border (Malaba) Road
Funded by Government of Uganda

Year: February 2019 - February 2020

Location: Mbale-Siroko Districts Uganda.

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

Client: Uganda National Roads Authority (UNRA)

Position held: Environmental Specialist

Main project activities:

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Management of instructions issued from time to time by the Resident Engineer and/or the Resident Engineer's Environmental Specialist;
- Monitoring of the Contractor's activities and preparation of a Monthly Environment Report;
- Advise and closely work with the Contractor's Health and Safety Officer on mainstreaming issues of gender and HIV/AIDS into the project;
- Preparation of the Final Environment Management Report upon project completion.
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environment Specialist, Design and Build of Strategic Bridges on the National Network Lot 3: Design and Build of 3 Strategic Bridges in Arua District: Alla (Anzuu), Gazi (Rhino Camp), Aca (Rhino Camp) Funded by Government of Uganda

Year: August 2019 - August 2020

Location: Arua District Uganda.

Client: Uganda National Roads Authority (UNRA)

Position held: OSH Specialist

Main project activities:

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Management of instructions issued from time to time by the Resident Engineer and/or the Resident Engineer's Environmental Specialist;
- Monitoring of the Contractor's activities and preparation of a Monthly Environment Report;
- Advise and closely work with the Contractor's Health and Safety Officer on mainstreaming issues of gender and HIV/AIDS into the project;
- Preparation of the Final Environment Management Report upon project completion.
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environment Specialist, Design and Build for Reconstruction of washed-out and failed bridges in Northern Lot 1: Aji (20m span) and Ora (30m span) Bridges Funded by Government of Uganda

Year: September 2018 – April 2020

Location: Northern Uganda.

Client: Uganda National Roads Authority (UNRA)

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

Position held: Environmental Specialist

Main project activities:

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and International Environmental and Social Considerations;
- Management of instructions issued from time to time by the Resident Engineer and/or the Resident Engineer's Environmental Specialist;
- Monitoring of the Contractor's activities and preparation of a Monthly Environment Report;
- Advise and closely work with the Contractor's Health and Safety Officer on mainstreaming issues of gender and HIV/AIDS into the project;
- Preparation of the Final Environment Management Report upon project completion.
- Field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environmental and Social Impact Assessment (ESIA) of Climate Resilient Community Access Road and a Bridge (Lakang-Kampala Landing Site Road 13.1km) Under the Project for the Restoration of Livelihoods in Northern Region (PRELNOR)

Year: August 2020

Location: Adjumani, Agago, Gulu, Kitgum, Lamwo, Nwoya, Omoro, and Pade Districts Uganda.

Client: Ministry of Local Government

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments and write up of a Final ESIA Report.

Name of assignment: Environmental, Social Health and Safety Audit (ESHA) for Construction of Rural Electrification Projects under Lot 1, 2,3,4, and 5 in North Western Service Territories, Mid-Western, South and South Western Service Territories, Mid-Western and South Service Territories, North Western and Rwenzori Service Territories and Mid-Western Service Territory in accordance with WB ESS and national guidelines.

Year: November 2019

Location: (Mbarara, Isingiro, Ntungamo and Kabale, Gulu, Lyantonde, Rakai, Masaka, Lwengo, Sembabule, Bukomansimbi and Kiruhura, Hoima, Masindi, Kibaale, Kiryandongo Kyenjojo, Kyegegwa, Kabarole, Kasese, Rubirizi Mitoma, Sheema, Bushenyi, and Buhweju Nebbi and Arua

Client: Rural Electrification Agency

Main project features: To undertake baseline investigations and to undertake an acceptable ESHA report that meets Uganda legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental/ OSH Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESHA Report and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets World Bank Environmental and Social Standards ESS.

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

Name of assignment: Update of the Environmental and Social Impact Assessment (ESIA) for Construction of Rural Electrification for the Proposed Medium Voltage Distribution Lines in the Districts of Masaka, Gomba, Butambala and Mukono (Lot 1, Package B, Lines 11, 12,13) in accordance with ADB ESS and national guidelines.

Year: October 2019

Location: Masaka, Gomba, Butambala and Mukono

Client: GOPA-International Energy Consultants GmbH

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Uganda legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets ADB Environmental and Social Standards ESS.

Name of assignment: Update of the Environmental Consultant for the 11kv/33kv Medium Voltage Power Lines and Associated Low Voltage Networks for Grid Extension Projects Under ERT III, Package B: Lot 3b In Central Region, Under the Rural Electrification Project in accordance with ADB ESS and national guidelines.

Year: October 2020

Location: Masaka,

Client: Datpo Investments Limited

Main project features: To undertake baseline investigations and to undertake an acceptable ESMP report that meets Uganda legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Monthly Reports, as per ESMP Requirements

To ensure that specific environmental and social plans, procedures and work instructions as applicable are prepared, reviewed and approved prior to commencement of work;

Ensure that, on an ongoing basis, the requirements of the CESMP and sub-plans are communicated via formal training programs and tool box talks to all construction workers;

Review Subcontractors' activities to ensure compliance with the CESMP and complementary plans;

Evaluate the project EHS plans/actions and update them as necessary to incorporate any additional requirements contained within the CESMP and complementary plans;

Review ongoing construction plans with regard to their potential for adverse impacts, particularly if activities take place in environmentally sensitive areas;

Ensure that remedial actions for non-compliances or incidents related to environment, social and health and safety aspects are implemented at site;

Conduct inspections and monitoring of all aspects of environmental, social health and safety performance at all site locations;

Deploy and supervise all personnel controlling exit and entry at work place are checked with temperature guns and hand washed for COVID-19;

Checking records of checked personnel of COVID-19;

Any other matters or issues relating to environmental and social aspects of the works as defined by the Engineer. It will be the duty of the Contractors

Environmental expert to review ongoing construction plans with regards to their potential for adverse impacts, particularly if activities are being undertaken in environmentally sensitive areas; and

Coordinate all environmental aspects along the project area including managing all sensitive ecosystems traversed and along the project areas and fulfilling the implementation of CESMP on the project.

Detailed tasks assigned on Consultant's Team of Experts:	Reference to prior work / assignments that best illustrates capability to handle the assigned tasks
	<p>Name of assignment: Environmental and Social Impact Assessment (ESIA) for Construction of Rural Electrification Projects under Lot 1 in Kiryandongo, Kakumiro, Gulu, Nebbi and Arua Districts (135.45 KM, 82.09 KM LV) in accordance with ADB ESS and national guidelines.</p> <p>.</p> <p>Year: November 2018</p> <p>Location: Kiryandongo, Kakumiro, Gulu, Nebbi and Arua</p> <p>Client: Rural Electrification Agency</p> <p>Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Uganda legal requirements and the donors Environmental and Social Safeqaurds Procedures.</p> <p>Position held: Environmental/ OSH Specialist</p> <p>Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets ADB Environmental and Social Standards ESS.</p>
	<p>Name of assignment: Environmental and Social Impact Assessment (ESIA) for Construction of Rural Electrification Projects under ERT – III for Package 4: Lots 9, 10 and 11 in accordance with ADB ESS and national guidelines.</p> <p>Year: August 2017</p> <p>Location: Ntungammo/Rukungiri, Bundibugyo/Ntoroko and Ibanda</p> <p>Client: Rural Electrification Agency</p> <p>Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Uganda legal requirements and the donors Environmental and Social Safeqaurds Procedures.</p> <p>Position held: Environmental/ OSH Specialist</p> <p>Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final ESIA and ESMP Reports and field measurements like air quality noise, vibration assessments and write up of a Final ESIA and ESMP Reports that meets ADB Environmental and Social Standards ESS.</p>
	<p>Name of assignment: Environmental and Social Impact Assessment (ESIA) South Western Cluster - Development of Water and Sanitation Infrastructure for The Mbarara-Masaka Areas – Package 1: Kagera Water Works by National Water & Sewerage Cooperation (NWSC) in accordance with WB ESS and national guidelines.</p> <p>Year: September 2020</p> <p>Location: Mbarara-Masaka Districts Uganda.</p> <p>Client: National Water & Sewerage Cooperation (NWSC)</p> <p>Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeqaurds Procedures.</p> <p>Position held: OSH Specialist</p> <p>Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments and Write up of a Final ESIA Report.</p>
	<p>Name of assignment: Environmental and Social Impact Assessment (ESIA) for the Proposed Construction of Selected Health Centres in 82 Districts of North & West Nile, Eastern and Western and Central Uganda Under Uganda Reproductive Maternal and Child Health Improvement Project by Ministry of Health (MoH) in accordance with WB ESS and national guidelines.</p> <p>Year: December 2019</p> <p>Location: North & West Nile, Eastern and Western and Central Uganda (82 Districts Uganda).</p> <p>Client: Ministry of Health (MoH)</p>

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle the assigned tasks

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, and water quality assessments and Write up of a Final ESIA Report.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for the Proposed Construction of 12 Suspension and Suspended Footbridges Project under Bridges to Prosperity in Bukwo District.

Year: July 2020

Location: Bukwo-Kween–Kapchorwa Districts Uganda.

Client: Bridges to Prosperity (B2P) and Uganda National Roads

Authority

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of Scoping report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments and Write up of a Final ESIA Report.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for the Proposed Construction of 5 Suspension and Suspended Footbridges Project under Bridges to Prosperity in Bukwo District.

Year: January 2019

Location: Bukwo-Kween–Kapchorwa Districts Uganda.

Client: Bridges to Prosperity (B2P) and Uganda National Roads

Authority

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of Scoping report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments and Write up of a Final ESIA Report.

Name of assignment: Assistant Contractor's Environment Specialist, Construction of the \$360 Million New Bridge across the River Nile at Jinja, Zenitaka-Hyundai Joint Venture. Funded by JICA and Government of Uganda

Year: 2014-2018

Location: Jinja District Uganda.

Client: Zenitaka-Hyundai

Position held: OSH Specialist

Main project features:

- Preparation of the Contractor's Environmental Action Plan and all other documentation required to manage environmental matters of the project and provide guidance and instruction to the Contractor on implementation;
- Ensure that the Contractor's activities are carried out in line with Ugandan laws and JICA Environmental and Social Considerations;
- Management of instructions issued from time to time by the Resident Engineer and/or the Resident Engineer's Environmental Specialist;

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

- Monitoring of the Contractor's activities and preparation of a Monthly Environment Report;
- Advise and closely work with the Contractor's Health and Safety Officer on mainstreaming issues of gender and HIV/AIDS into the project;
- Preparation of the Final Environment Management Report upon project completion.

Name of assignment: Consultancy Services for Environment, Health and Safety, HIV/AIDS and Gender Management for Construction of the New Nile Bridge Project in Jinja. The services rendered to Zenitaka – Hyundai Joint Venture for the 48 months' construction period include (total value of \$600,000):

- Provision of full-time Environment Officer and Health and Safety Officer;
- Monthly Environmental Monitoring and Reporting;
- Gender sensitization and reporting;
- Monthly Occupational Health and Safety Reporting
- HIV/AIDS services (VCT, STDs etc.);
- Water Quality Monitoring for the River Nile;

Position held: Environmental Specialist

Name of assignment: Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) for the Proposed upgrading of the 105-Km Koboko-Yumbe–Moyo road in Koboko-Yumbe–Moyo Districts by Uganda National Roads Authority (UNRA) in accordance with WB ESS and national guidelines.

Year: January 2020

Location: Koboko-Yumbe–Moyo Districts Uganda.

Client: Uganda National Roads Authority (UNRA)

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: OSH Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for Albertine Region Sustainable Development Project (ARSDP) different infrastructure development projects i.e., 13 markets, 2 fish landing sites, and an abattoir of in the Local Governments (LGs) of Hoima, Kikuube and Buliisa Districts by Ministry of Lands Housing and Urban Development (MoLHUD) in accordance with WB ESS and national guidelines.

Year: February 2020

Location: Hoima, Kikuube and Buliisa Districts Uganda.

Client: Ministry of Lands Housing and Urban Development (MoLHUD)

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise and water quality assessments.

Preparation of three separate ESIA reports for i.e. Landing sites, Markets, An Abattoir.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for the Proposed Construction for the ERT Phase III 307km for Package A in

Detailed tasks assigned on Consultant's Team of Experts:	<p>Reference to prior work / assignments that best illustrates capability to handle the assigned tasks</p> <p>Butaleja, Mbale, Bududa, Tororo, Jinja, Busia, Iganga, Namutumba. Masaka, Gomba/Butambala and Mukono</p> <p>Year: November 2019</p> <p>Location: Butaleja, Mbale, Bududa, Tororo, Jinja, Busia, Iganga, Namutumba Masaka, Gomba/Butambala and Mukono Districts of Uganda.</p> <p>Client: Rural Electrification Agency (REA)</p> <p>Authority</p> <p>Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.</p> <p>Position held: Environmental Specialist</p> <p>Activities performed: The tasks included write-up of Scoping report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments and Write up of a Final ESIA Report.</p> <p>Name of assignment Consultancy Services for Environmental, Health, Safety and Social (EHSS) Audit for Uganda Support to Municipal Infrastructure Development Projects (USMID) in 14 municipalities (Arua, Gulu, Lira, Soroti, Moroto, Mbale, Jinja, Entebbe, Masaka, Mbarara, Kabale, Fort Portal, Hoima and Tororo) and Districts in accordance with WB ESS and national guidelines.</p> <p>Year: April, 2019</p> <p>Location: Arua, Gulu, Lira, Soroti, Moroto, Mbale, Jinja, Entebbe, Masaka, Mbarara, Kabale, Fort Portal, Hoima and Tororo) Districts Uganda.</p> <p>Client: Ministry of Lands Housing and Urban Development (MoLHUD)</p> <p>Main project features: The Government of Uganda through the Ministry of Lands, Housing and Urban Development is implementing the Uganda Support to Municipal Infrastructure Development (USMID) Program with financial support from the International Development Association (IDA) of the World Bank.</p> <p>, And the main feature was to carry out Environmental, Social Health & Safety Audit that meets Ugandan legal requirements and World Bank Environmental and Social Safeguards Policies.</p> <p>Position held: OSH/ Specialist/ Air Quality, Noise & Vibration Specialist.</p> <p>Activities performed: The overall objective of the audit was to evaluate environmental performance and Operational Health and Safety (OHS) compliance of ongoing project activities, identify and recommend options for improvement. Specifically, the audit sought to:</p> <p>Assess environmental and social compliance with requirements of national laws and regulations;</p> <p>Verify compliance of construction activities with conditions of approval in ESIA certificate issued by NEMA.</p> <p>Consult to obtain views about impacts the affected / nearby communities have identified.</p> <p>Identify and recommend corrective actions to rectify prevailing socio-environmental non-compliances.</p> <p>Carry out onsite measurements like air quality, noise and vibration assessments. And preparation of the final for Environmental, Health, Safety and Social (EHSS) Audit independent Reports for each site.</p> <p>Name of assignment: Environmental and Social Impact Assessment (ESIA) of the proposed Use of Clothianidin (SumiShield) for Indoor Residual Spraying in 15 Districts of Uganda under the Presidential Malaria Initiative (PMI) Vectorlink Uganda Project.</p> <p>Year: March 2019</p> <p>Location: Alebtong, Amolatar, Budaka, Butaleja, Dokolo, Namutumba, Pallisa, Butebo, Bugiri, Kaberamaido, Kibuku, Lira, Otuke, Serere and Tororo</p> <p>Client: Abt Associates and supported by USAID.</p>
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Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle the assigned tasks

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and USAID's 22 CFR 216 Agency Environmental Procedures.

Position held: Environmental Specialist/ Waste Management Specialist

Activities performed: Reviewing relevant environmental and occupational health and safety regulations inspect the EHS signs and policies in the work place to make sure they are up to standard.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for the Construction of Foot-Bridges in Kapchorwa & Kween Districts by Bridges to Prosperity (B2P) In Partnership with Uganda National Roads Authority (UNRA) / Ministry of Works & Transport- Government of Uganda

Year: January 2019

Location: Kapchorwa & Kween Districts Uganda.

Client: Bridges to Prosperity (B2P)

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental/OSH Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise and water quality assessments.

Name of assignment: Environmental, Social Health & Safety Audit (ESHA) of the proposed Use of Clothianidin (SumiShield) for Indoor Residual Spraying in 15 Districts of Uganda under the Presidential Malaria Initiative (PMI) Vectorlink Uganda Project.

Year: March 2019

Location: Alebtong, Amolatar, Budaka, Butaleja, Dokolo, Namutumba, Pallisa, Butebo, Bugiri, Kaberamaido, Kibuku, Lira, Otuke, Serere and Tororo

Client: Abt Associates and supported by USAID.

Main project features: To carry out Environmental, Social Health & Safety Audit that meets Ugandan legal requirements and USAID's 22 CFR 216 Agency Environmental Procedures.

Position held: OSH/Waste Management Specialist

Activities performed: The overall objective of the audit was to evaluate environmental performance and Operational Health and Safety (OHS) compliance of ongoing project activities, identify and recommend options for improvement. Specifically, the audit sought to:

Assess environmental and social compliance with requirements of national laws and regulations;

Verify compliance of construction activities with conditions of approval in ESIA certificate issued by NEMA.

Consult to obtain views about impacts the affected / nearby communities have identified.

Identify and recommend corrective actions to rectify prevailing socio-environmental non-compliances.

Name of assignment: Environmental and Social Impact Assessment (ESIA) for the Proposed Kihimbi Columbite- Tantalite Mine in Kisoro District

Year: October 2018

Location: Kisoro District Uganda.

Client: RAGHV Investments Limited

Main project features: To undertake baseline investigations and to undertake an acceptable ESIA report that meets Ugandan legal requirements and the donors Environmental and Social Safeguards Procedures.

Position held: Environmental Specialist

Activities performed: The tasks included write-up of the Inception Report, compilation and quality assurance of the Draft and Final Reports and field measurements like air quality noise, vibration and water quality assessments and Write up of a Final ESIA Report.

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

Name of assignment: Environmental and Social Impact Assessment
Name of assignment: Consultancy Services for Environmental, Health, Safety
and Social (EHSS) Audit of Isimba 183 MW Hydropower Plant and the
Transmission.

Year: November, 2018

Location: Kamuli District Uganda

Client: Ministry of Energy and Mineral Development
(MEMD).

Main project features: The Government of Uganda through the Ministry of
Energy and Mineral Development (MEMD), together with the Uganda Electricity
Generation Company Limited (UEGCL) and Uganda Electricity Transmission
Company Limited (UETCL) as implementing Agencies, are developing Isimba 183
MW Hydropower Plant and the Transmission line. And the main feature was to
carry out Environmental, Social Health & Safety Audit that meets Ugandan legal
requirements.

Position held: Environmental Specialist

Activities performed: The overall objective of the audit was to evaluate
environmental performance and Operational Health and Safety (OHS)
compliance of ongoing project activities, identify and recommend options for
improvement. Specifically, the audit sought to:

Assess environmental and social compliance with requirements of national laws
and regulations;

Verify compliance of construction activities with conditions of approval in ESIA
certificate issued by NEMA.

Consult to obtain views about impacts the affected / nearby communities have
identified.

Identify and recommend corrective actions to rectify prevailing socio-
environmental non-compliances.

Carry out onsite measurements like air quality, noise and vibration assessments.

Name of assignment Consultancy Services for Environmental, Health, Safety
and Social (EHSS) Audit of Second Kampala Institutional and Infrastructure
Development Project (KIIDP 2)- Road Upgrading and Junction Improvement
Works, Batch-1A in accordance with WB ESS and national guidelines.

Year: October, 2018

Location: Kampala and Wakiso Districts Uganda

Client: Kampala City Council Authority (KCCA).

Main project features: The Government of Uganda has processed a loan from
International Development Association (IDA), through the Kampala Institutional
and Infrastructure Development Project (KIIDP 2). Part of the credit is meant for
improving key road links and junctions to improve traffic flow within Kampala
Capital City. The proposed (KIIDP 2) involves upgrading and improvement of
junctions. The junctions are located at Bwaise, Fairway Hotel and Kabira Country
club. The proposed upgrading of roads to Dual carriageway cover Kiira road
section, Bakuli-Nakulabye-Kasubi and Makerere Hill road. The Mambule road will
be reconstructed to single paved carriageway. And the main feature was to
carry out Environmental, Social Health & Safety Audit that meets Ugandan legal
requirements and World Bank Environmental and Social Safeguards Policies.

Position held: Environmental Specialist/ Air Quality, Noise & Vibration
Specialist

Activities performed: The overall objective of the audit was to evaluate
environmental performance and Operational Health and Safety (OHS)
compliance of ongoing project activities, identify and recommend options for
improvement. Specifically, the audit sought to:

Assess environmental and social compliance with requirements of national laws
and regulations;

Verify compliance of construction activities with conditions of approval in ESIA
certificate issued by NEMA.

Detailed tasks assigned on
Consultant's Team of Experts:

Reference to prior work / assignments that best illustrates capability to handle
the assigned tasks

Consult to obtain views about impacts the affected / nearby communities have
identified.
Identify and recommend corrective actions to rectify prevailing socio-
environmental non-compliances.
Carry out onsite measurements like air quality, noise and vibration assessments
And Final Report Writing.

Name of assignment or project: Consultancy Services for environmental and
Social Compliance Audit for the Agricultural Technology and Agribusiness
Advisory Services (ATAAS) in accordance with WB ESS and national guidelines.

Year: 6/2016 – 9/2016

Location: Uganda

Client: National Agricultural Research Institute

Main project features: as above

Positions held: Environmental Compliance Auditor/ OSH Specialist

Activities performed: To assess the project's compliance with national laws and
the World Bank safeguards policies.

Name of assignment or project: Consultancy Services for Developing Solid Waste
Management Strategies for 14 Municipalities in Uganda (Arua, Gulu, Lira, Soroti,
Mbale, Tororo, Jinja, Entebbe, Masaka, Mbarara, Kabale, Hoima, Fort Portal and
Moroto) in accordance with WB ESS and national guidelines.

Year: 2/2016 – 9/2016

Location: Uganda

Client: Ministry of Lands, Housing and Urban Development and supported by the
World Bank under the Uganda Support to Municipal Infrastructure Development
(USMID).

Main project features: as above

Positions held: Occupational Health & Safety Specialist

Activities performed:

To develop Model Bye-Laws to guide each of the Municipal Councils in
enforcement and thirdly to prepare an Information, Education and
Communication (IEC) Strategy and implementation plan for each municipality.
Responsibilities included providing technical guidance on solid waste storage,
collection, transport and disposal and to provide guidance on management
options for each municipality.

Name of assignment or project: Consultancy Services for environmental and
Social Compliance Audit for the Uganda Support to Municipal Infrastructure
Development (US-MID) Project in accordance with WB ESS and national
guidelines.

Year: 4/2016 – 9/2016

Location: Uganda

Client: Ministry of Lands, Housing and Urban Development

Main project features: as above

Positions held: OHS/ Waste Management Specialist

Activities performed:

To assess the project's compliance with national laws and the World Bank
safeguards policies and of roads and drainage in 14 selected municipalities in
Uganda.

Name of assignment or project: Consultancy Services for environmental and
Social Compliance Audit for the Community Agricultural Infrastructure
Improvement Programme – Project 2 (CAIP – 2) in Uganda in accordance with
ADB ESS and national guidelines.

Year: 2/2016

Location: Uganda

Client: Ministry of Local Government

Main project features: as above

Positions held: OHS/ Environmental Specialist

Detailed tasks assigned on Consultant's Team of Experts: Reference to prior work / assignments that best illustrates capability to handle the assigned tasks

Activities performed:

To assess the project's compliance with national laws and the African Development Bank policies in Uganda.

Name of assignment or project: Consultancy Services: for environmental and Social Compliance Audits for 12 sites in Exploration Area-2, in Buliisa & Nwoya Districts.

Year: 2015

Location: Uganda

Client: Tullow Uganda Operations Pty Ltd.

Main project features: as above

Positions held: OHS/ Waste Management Specialist

Activities performed:

To assess the project's compliance with national laws in Uganda.

Expert's Contact Information: Email: ratugonza3@gmail.com
phone: 0705422221

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client.



Date: 27 February 2026

Richard Atugonza
Name of Expert

Signature

(Day/Month/Year)

CV for Mr. Robert Mugabe (Environmentalist)

Name of Expert	MUGABE ROBERT
Profession	Environmental Specialist
Date of Birth	17 th /01/1988
Country of Citizenship	Uganda
Marital Status	Single
Contacts	0773898773/0758350141
Email	salongoawoda@gmail.com

OBJECTIVE STATEMENT

I would like to be given an opportunity to demonstrate my capabilities to the mutual benefit of my employer, myself and to the people that I serve and also work in a team based environment where I can utilize my full range of knowledge and skills while learning, developing and building my knowledge further.

EDUCATION BACKGROUND:

YEAR	INSTITUTION	AWARD
2009-2012	Makerere University Kampala	Bachelors of arts in Environmental Management
2007-2008	Maddox Secondary School	Uganda Advanced Certificate of Education (UACE)
2002-2006	Maddox Secondary School	Uganda Certificate of Education (UCE)

OTHER TRAININGS:

Working Safely	Institute of Occupational Safety and Health (IOSH) in association with E360 Group Ltd.
Certificate in computer studies	Makerere University Kampala
Certificate of service as a peer trainer of gender mainstreaming programme	Makerere University Kampala
Certificate on participatory rural appraisal and community action planning	Makerere university Kampala

EXPERIENCE RECORD

Projects undertaken

From	To	Project	Role	Duration in Involvement	Relevance Experience
May 2024	Now	Civil Works for the Upgrade on Koboko Yumbe-Moyo Road Project	<p>Environmental specialist Assessing the level of compliance and ensuring compliance of the contractor to the recommendations of road ESIS and the contractors approved ESMP and NEMA's conditions of approval of the road ESIS.</p> <p>Preparing and reviewing ESIA documents for all the auxiliary sites.</p>	To date	<ul style="list-style-type: none"> • Preparation and implementation of the ESIA for project road. • Preparation and submission of Environmental Social Management Plan. • Conducting Environmental protection, awareness campaigns and sensitization programs to all works in their different working environments and communities residing along the road. • Carrying out resettlement of graves and family tracing for the deceased body remains. • Ensuring implementation of the project within the Uganda laws. • Preparation of monthly progress reports • Attending site inspections and meetings for both internal and world bank missions.

Oct 2021	Feb. 2023	Civil Works for the Upgrading of Gulu Logistics Hub Access Road to paved bituminous standard (2.2 Km)	<p>Environmental and social safeguards Specialist</p> <p>Responsibilities:</p> <p>Assessing the level of compliance and ensuring compliance of the contractor to the recommendations of road ESIS and the contractors approved ESMP and NEMA's</p>	2.4 years	<ul style="list-style-type: none"> • Preparation and implementation of the ESIA for project road. • Preparation and submission of Environmental Social Management Plan. • Conducting Environmental protection, awareness campaigns and sensitization programs to all works in their different working environments and communities residing along the road. • Carrying out resettlement of graves and family tracing for the deceased body remains.
			<p>conditions of approval of the road ESIS.</p> <p>Conducting resettlement action plans for the PAPS</p> <p>Preparing and reviewing ESIA documents for all the auxiliary sites.</p>		<ul style="list-style-type: none"> <input type="checkbox"/> Ensuring implementation of the project within the Uganda laws. <input type="checkbox"/> Preparation of monthly progress reports <input type="checkbox"/> Carrying out EHS compliance audit in line with national and international laws.

Jan 2015	Nov. 2021	Civil Works for the Upgrading of Package 3: Olwiyo – Gulu Road (70.3KM) and 10.5KM for Anaka and Gulu Town Roads.	<p>Environment, Health and Safety (EHS) Specialist</p> <p>Responsibilities:</p> <p>Assessing the level of compliance and ensuring compliance of the contractor to the recommendations of road ESIS and the contractors approved ESMP and NEMA’s conditions of approval of the road ESIS.</p>	6 years	<ul style="list-style-type: none"> <input type="checkbox"/> Preparation and implementation of the ESIA for project road. <input type="checkbox"/> Preparation and submission of Environmental Social Management Plan. <input type="checkbox"/> Conducting Environmental protection, awareness campaigns and sensitization programs to all works in their different working environments and communities residing along the road. <input type="checkbox"/> Carrying out resettlement of graves and family tracing for the deceased body remains. <input type="checkbox"/> Ensuring implementation of the project within the Uganda laws. <input type="checkbox"/> Preparation of monthly progress reports <input type="checkbox"/> <input type="checkbox"/> Carrying out EHS compliance audit in line with national and international laws.
Jan 2013	Nov 2014	Construction of six Bridges in North Western Uganda	<p>Environmental Manager</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Environmental supervision and monitoring for the construction of six Bridges in North West Uganda 	2 years	<ul style="list-style-type: none"> <input type="checkbox"/> Carry out preliminary Environmental assessment and stakeholder consultation as well as cost benefit analysis.

Oct 2012	Dec 2012	Mabale growers tea factory estates	<p>Environmental Officer Responsibilities:</p> <ul style="list-style-type: none"> • Make an annual estate budget together with the estate manager and implement. • Plan, coordinate and monitor plucking, weeding and pruning activities in the tea tree gardens. • Supervise fertilizer application in the field during fertilizer application season. • Carryout worker recruitment in case of labor shortages. • Carry out regular infilling of gaps in the tea gardens and look after the in fills well 	0.5 years	<ul style="list-style-type: none"> <input type="checkbox"/> Implement the tree (eucalyptus, pine and grivella) planting program as provided by the estate manager. <input type="checkbox"/> Manage the tree plantations i.e. weeding, pest (termite control), thinning in the areas under my jurisdiction. <input type="checkbox"/> Organize and monitor transport for Greenleaf to the factory daily. <input type="checkbox"/>
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Job Description

- Preparation of environment and social impact assessment for all the auxiliary sites for the projects ie borrow pits, campsites, dumpsites, quarries, and asphalt plants.
- Preparation of scoping reports for the selected projects.
- Supervision of projects and Reviewing of Environmental and Social Impact Statements (ESIS), Resettlement Action Plans (RAPs), Final Environmental Mitigation Reports, Environmental and Social Management and Monitoring Plans, Waste Management and Monitoring Plans, Occupational Health and Safety Management Plans, HIV/AIDS, among other environmental and social planning tools.
- Carrying out risk assessment for different project activities
- Inspection of annual Environmental Audits for UNRA projects in the fulfilment of the National Environment (Audit Management) Regulations, 2006.
- Ensures that Environmental Management issues are addressed on projects.
- Inspecting works implementation and attending site meetings for road projects
- Liaising with National Environment Management Authority (NEMA) and other Government Departments.
- Conducting Public Disclosures of ESIS and RAPs in AWODA □ Prepares ToRs for Environment Audits (EA) for the project.
- Reviews contractors' proposals and plans for temporary works, camps site, quarries, borrow pits, etc.
- Preparation of restoration and decommissioning plans for the auxiliary sites like borrow pits, quarries, dumpsites and campsites.
- Prepares regular reports in relation to the project.
- Performs such other related duties as may be by assigned from time to time.
- Representing the company outside its boundaries like NEMA, and other government bodies and NGOs.
- Build a strong and open communication between the contractor, employees and the local authorities.

Languages spoken

LANGUAGE	READING	SPEAKING	WRITING
English	Excellent	Excellent	Excellent
Luganda	Excellent	Excellent	Excellent
Lunyoro/Rutooro	Excellent	Excellent	Excellent

Special Skills, Capabilities and Competencies

- Field working skills;
- Excellent communication and interpersonal skills;
- High ethics, integrity and confidentiality;
- Good reporting skills;
- Analytical and coordinating skills;
- High level of confidentiality;
- Honesty;
- On time response to instructions.

REFEREES:

1. Dr. Paul Musali
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2. Atwijukire Simpson
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