MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project (ARSDP)

PROJECT BRIEF FOR THE PROPOSED REHABILITATION OF SELECTED GRAVEL ROADS IN BULIISA DISTRICT

VOLUME 2

BASELINE SPECIALIST REPORTS AND OTHER APPENDICES

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Avian Specialist Report

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1. Introduction

1.1 Global context of avifauna

Avifauna provides a reliable and easy to read environmental barometer, allowing us to determine the pressures our current way of life are putting on the environment (Pomeroy and Tengecko, 1986). This is so because birds are wide spread, occurring in almost every habitat and diverse yet taxonomically well known and stable (Urban *et al.,* 1997). There are over 10,000 species of birds in the world. Of these, 3200, 2900, 2300, 2000, 1000 and 65 species are found in South America, Asia, Africa, North America, Europe and Antarctica respectively (Birding, 2011). Uganda alone harbours at least 1050 avifauna species.

Birds play significant ecological roles as predators, pollinators, scavengers, seed dispersers, seed predators and are in most cases used as biodiversity indicators. In addition, many birds are charismatic, attracting foreign exchange to their countries from tourists (Stevenson and Fanshawe, 2002). In spite of this, common birds are in decline across the world, providing evidence of a rapid deterioration in the global environment that is affecting all life on earth (BLI, 2000). According to BLI (2004), over 1,200 species are considered threatened with extinction, representing 13% of the extant bird species in the world. There are 2,082 species that are urgent priorities for conservation action. A total of 132 species are documented as having gone extinct since 1500. Up to 19 species were lost in the last quarter of the 20th century, and three species are known or suspected to have gone extinct since 2000. For example the last known individual of Spix's Macaw (*Cyanopsitta spixii*) died in Brazil towards the end of 2000 and the last two known individuals of Hawaiian Crow (*Corvus hawaiiensis*) (classified as Extinct in the Wild) also died in June 2002. Additionally, the last known individual of Po'ouli (*Melamposops phaeosoma*) also from the Hawaiian Islands, died in captivity in November 2004 (BLI, 2008).

Overall, bird species are continuing to slip closer to extinction, with any conservation successes being outweighed by the number of species deteriorating in status (BLI, 2000). As such, globally threatened birds occur worldwide, nearly all countries support one or more and some countries are exceptionally important. Brazil and Indonesia support 127 and 122 globally threatened birds respectively. Small islands hold disproportionately high numbers of globally threatened irds, supporting over half of threatened species. Threatened seabirds are found throughout the world's oceans, with particular concentrations in the Tasman Sea and the south-western Pacific around New Zealand. Forest is by far the most important habitat for Globally Threatened Birds, supporting 87% of species. Shrublands, inland wetlands and grasslands are also important, supporting 24%, 15%% and 15% of Globally Threatened Birds, respectively (BLI, 2008).

The most important threats to the world's birds are the spread of agriculture (significantly affecting 73% of threatened bird species), infrastructure development and human use of biological resources, either through direct exploitation of bird populations or from the indirect impacts on bird populations of forest logging (which combined affect 71% of birds). These threats are the main drivers behind habitat degradation and conversion which are affecting 95% of Globally Threatened Bird populations. Invasive species (especially predators) also threaten nearly a third of Globally Threatened Birds. Increasingly, problems are being caused by human activities, incidental mortality (notably the drowning of seabirds in long-line fisheries) and environmental pollution (on land, in wetlands and seas, and in the air), with human-induced climate change having serious longer term consequences for the world's birds (Birding, 2011).

1.2 African avifauna

Africa is home to about 2300 species of birds. The continent has some of the Globally Threatened species including: Lappet-faced Vulture *Torgos tracheliotus* (Vulnerable) (VU), Houbara Bustard *Chlamyodotis undulata* (Near Threatened) (NT), Blue Swallow *Hirundo atrocaerulea* (VU), Spotted Ground-thrush *Zoothera*

guttata (Endangered) (EN), White-necked Picathartes *Picathartes gymnocephalus* (VU), Grey-necked Picathartes *Picathartes oreas* (VU), Grauer's Swamp-warbler *Bradypterus graueri* (EN) (Byaruhanga *et al*., 2006). About 192 avian species in East Africa are among the globally threatened species (Hilton-Taylor, 2000).

1.3 Avifauna in Uganda

In Uganda, there are about 1050 species of birds (Carsewell *et al*., 2005). This makes the country 50 points higher than the entire European continent, and therefore one of the richest and attractive birding destinations in the world (Birding Uganda, 2011). Birds live in forests, wetlands, grasslands, farms and built environments such as Makerere University and urban centres (Carsewell, 1986; Carsewell *et al*., 2005; Okiror, 2013).

A total of 24 species are Albertine Rift Edemics (Stattersfield *et al.,* 1998). The Fox's Weaver is the only Ugandan endemic bird while the Feral Pigeon (*Columba livia*) and the House Sparrow (*Passer domesticus*) are some of the non-native species in Uganda (Pomeroy *et al*., 2002).

Stevenson and Fanshawe (2002), reported 30 Important Bird Areas (IBAs) in Uganda covering 7% of the total land area of the country. Some of Uganda's IBAs include; Bwindi Impenetrable Forest, Rwenzori Mountains National Park, Kibale National Park, Queen Elizabeth National Park, Nabugabo Wetland, Mabira Forest Reserve, Budongo Forest, Mount Otzi Forest Reserve, Lake Bisina, Mount Elgon National Park and Kidepo Valley National Park. The 1 kilometer buffer along the Albert Nile within Buliisa is also a gazetted IBAs in Uganda. According to Byaruhanga (2007), Mabira is an IBA containing 30% of all birds found in Uganda, including many endangered species such as Nahan's Francolin. This indicates that Mabira is a very rich biodiversity site. Some of the Uganda's most sought after birds for tourism include; Shoebill, African Green Broadbill, Green-breasted Pitta, Nahan's Francolin, Karamoja Apalis, Rwenzori Turaco and the Purvell's Illadopsis (Byaruhanga *et al*., 2001).

2. Study objectives

Infrastructure development including the proposed upgrade of gravel roads in Buliisa district may affect some trees and other habitats thus adversely impacting on avifauna. Avian species assessment was therefore undertaken to;

(i) ascertain the species composition and diversity,
(ii) determine species abundance,
(iii) document habitat preferences of the avifauna,
(iv) evaluate the IUCN Conservation status of the avian species, and,
(v) develop an avian Monitoring and Mitigation Plan (AMMP).

3. Study area and Methods

3.1 Study Area

The avifauna assessment in Buliisa was undertaken along three roads that are targeted for upgrade to gravel as presented in **Table 1.**

Table 1: Avifauna study sites

S.No	Road Name	Length (km)	Section	Carriage-way (Gravelled Width)	Road-way Width (Drain to Drain)	Required Clearance / Working width	Planned rehabilitation activities
1	Kisiabi – Kabolwa	9.8	Full Length	5.0	7	9	Road shaping, filling and culverts installation
2	Buliisa – Bugana	10.8	Full Length	5.0	7	9	
3	Ngwedo - Ndandamire - Bikongoro	10.7	Full Length	5.0	7	9	

3.2 Methods

Based on several variables, notably; habitat structure, facilities available to carry out the study and most importantly, the time within which the assessment was to be conducted in Buliisa district, a combination of three methods were used to collect data.

3.2.1 Timed Species Counts (TSCs)

With Timed Species count, transects each measuring about one to two kilometers were walked along project roads in Buliisa. At least 1 count was done along each road. A field guide by Stevenson and Fanshawe (2002) was used to identify birds. During the count all bird species positively identified were listed in the order in which they were seen or heard within a period of 30 to one hour.

One of the Ornithologists undertaking Timed Species Counts

3.2.2 Transect Counts

Road transects of four (4) kilometers, starting at the terminal points of each road were used to document birds. Other transects were placed in the mid-way, at equidistant locations from those set up at the terminal points. Transects counts were undertaken in the morning (starting at 06:30 Hrs EAT) and evening (from 16:00 Hrs).

The Lead Ornithologist, Ms. Immaculate Odd Irumba teaches school children how to identify birds as part of capacity building along the Kisomera-Nuel Camp road on Tuesday, August 15, 2017 6:07 PM. The Kisomera-Nuel Camp road was found to have several crop fields and trees and was deferred to Batch 2.

3.2.3 Point Counts

Point counts of birds were carried out at the existing hydrological features such as streams, ponds and wetlands; along the project roads. Owing to the difficulty in seeing birds in such forested areas, the investigators stood within the thickets to enlist all birds identified by calls or vision.

Each point count was undertaken within 10 minutes. Counts were conducted by identifying and recording all birds seen or heard within that time. The Point Counts were conducted between 6:00 AM and 9:00 AM and 4:00PM to 7:00PM since these were the peak hours for avian activity. Most birds were seen perching, roosting, flying or feeding, while others were heard singing.

3.2.4 Data Analysis

Field data was sorted and entered in MS Excel. Frequencies and percentages were generated and presented in Tables are recommended by Harry and Althoen (1994).

4. Key findings and Observations

4.1 Buliisa-Bugana Road

A total of 29 species of birds belonging to 18 families were recorded during the ornithological assessment along the Buliisa-Bugana road. The most sighted birds along the planned Buliisa-Bugana road were the Specked Mousebird, *Colius striatus* (*n*= 28), the Common Bulbul, *Pycnonotus barbatus* (*n*= 21) and the Black-Headed Gonolek, *Laniarius erythrogaster* (*n*= 20). *Colombidae, Estrildidae* and *Muscicapidae* were the most dominant families for avifauna encountered in this study. The habitat preference for about 99.4% (N=164) of birds recorded was shrubs. It is only the Grey Heron, *Ardea cinerea* that was sighted near a water pond. According to the IUCN, all the avian species recorded along the proposed Buliisa-Bugana road were not threatened and hence of Least conservation Concern (**Table 2**).

Table 2: List of bird species present along the Buliisa-Bugana road

Common Name	Scientific Name	Family	Habitat	Frequency	*IUCN Status
African Firefinch	*Lagonosticta rubricate*	Estrildidae	Shrub	7	LC
African Mourning Dove	*Streptopelia decipiens*	Columbidae	Shrub	9	LC
African Paradise-Flycatcher	*Terpsiphone viridis*	Monarchidae	Shrub	1	LC
African Pygmy-Kingfisher	*Ispidina picta*	Alcedinidae	Shrub	1	LC
Black-Headed Gonolek	*Laniarius erythrogaster*	Malaconotidae	Shrub	20	LC
Black-Headed Weaver	*Ploceus cucullatus*	Ploceidae	Shrub	1	LC
Blue-Breasted Kingfisher	*Halcyon malimbica*	Alcedinidae	Shrub	1	LC
Blue-Naped Mousebird	*Urocolius macrourus*	Coliidae	Shrub	2	LC
Blue-Spotted Wood-Dove	*Turtur afer*	Columbidae	Shrub	4	LC
Bronze Sunbird	*Nectarinia kilimensis*	Nectariniidae	Shrub	5	LC
Brown-Crowned Tchagra	*Tchagra australis*	Malaconotidae	Shrub	1	LC
Brown-Throated Wattle-Eye	*Platysteira cyanea*	Platysteiridae	Shrub	6	LC
Common Bulbul	*Pycnonotus barbatus*	Pycnonotidae	Shrub	21	LC
Familiar Chat	*Cercomela familiaris*	Muscicapidae	Shrub	3	LC
Grey Heron	*Ardea cinerea*	Ardeidae	Water pond	1	LC
Grey-Backed Camaroptera	*Camaroptera brachyuran*	Cisticolidae	Shrub	3	LC
Grey-Headed Sparrow	*Passer griseus*	Passerinae	Shrub	2	LC
Lesser Masked Weaver	*Ploceus intermedius*	Ploceidae	Shrub	4	LC
Pin-Tailed Whydah	*Vidua macroura*	Viduidae	Shrub	4	LC
Red-Cheeked Cordon-Bleu	*Uraeginthus bengalus*	Estrildidae	Shrub	13	LC
Red-Eyed Dove	*Streptopelia semitorquata*	Columbidae	Shrub	1	LC
Red-Headed Buebill	*Spermophaga ruficapilla*	Estrildidae	Shrub	1	LC
Red-Tailed Ant Thrush	*Neocossyphus rufus*	Turdidae	Shrub	1	LC
Ruppell's Long-tailed Starling	*Lamprotornis purpuropterus*	Sturninae	Shrub	16	LC
Semi-Collared Flycatcher	*Ficedula semitorquata*	Muscicapidae	Shrub	1	LC
Speckled Mousebird	*Colius striatus*	Coliidae	Shrub	28	LC
Tambourine Dove	*Turtur tympanistria*	Columbidae	Shrub	1	LC
White-Browed Robin-Chat	*Cossypha heuglini*	Muscicapidae	Shrub	5	LC
Yellow-Rumped Tinkerbird	*Pogoniulus bilineatus*	Lybiidae	Shrub	1	LC
Total	**29**	**18**	**2**	**164**	**1**

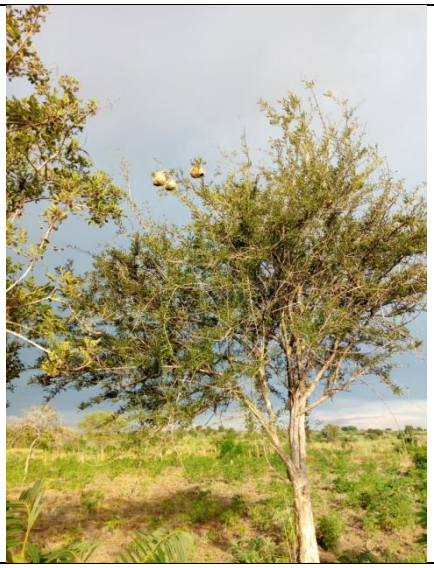
*IUCN redlist status, where applicable: EN-Endangered, VU-Vulnerable, NT-Near Threatened, LC: Least Concern. Avian count methods, where applicable: TC-Transect Counts, TSC-Timed Species Counts.

4.2 Kisiabi-Kabolwa Road

Thirty-seven (37) species of birds belonging to 25 families were recorded during the ornithological assessment along the Kisiabi-Kabolwa road. The most sighted birds along the planned Buliisa-Bugana road were the Bronze Mannikin, *Lonchura cucullata* (*n*= 32), the Cattle Egret, *Bulbucus ibis* (*n*= 30) and the African Pied Wagtail, *Motacilla aguimp* (*n*= 22). The dominant families included the *Ardeidae, Estrildidae* and *Muscicapidae* among the avifauna encountered in this assessment. The habitat preference for all the birds

was shrubs. According to the IUCN, 99.6% (N=224) of all the avian species recorded along the proposed Kisiabi-Kabolwaa road are in the Least conservation Concern list (**Table 3**).

The nest for the Yellow-Backed Weaver, *Ploceus melanocephalus, along the* Kisiabi-Kabolwa road on August 16, 2017 5:48 PM



Acacia sieberiana was a frequently observed habitat for the Yellow-Backed Weaver, *Ploceus melanocephalus,* along the proposed roads.

Avian species of conservation interest

The avifauna inventory recorded 37 species of birds. All the species were of Least Conservation Concern (LC).

However, there is a potential reduction in the size of marshes and emergent vegetation during civil works is likely to result in the reduction of individuals (Kim et al., 2009). In the contrary, the wetlands, marshes and nesting sites shoud be protected at Kabolowa and Buliisa at large if the number rof the avian species is to be increased or sustained (Kim et al., 2009). The ARSDP Project Environmental Specialist and the Buliisa District Environmental Officers shall undertake monthly field visits to enforce the implementation of ESMMP by the Contractor

Table 3: List of bird species present along the Kisiabi-Kabolwa road

Common Name	Scientific Name	Family	Habitat	Frequency and method			*IUCN Status
				TSC	TC	Total	
Black-Headed Gonoleck	*Laniarius erythrogaster*	Malaconotidae	Shrub	1	18	19	LC
Bronze Sunbird	*Nectarinia kilimensis*	Nectariniidae	Shrub	1	0	1	LC
Grey-Headed Gull	*Larus cirrocephalus*	Laridae	Shrub	1	0	1	LC
Grey Heron	*Ardea cinerea*	Ardeidae	Shrub	1	0	1	LC
Little Egret	*Egretta garzetta*	Ardeidae	Shrub	1	0	1	LC
Marabou Stork	*Leptoptilos crumentniferus*	Ciconiinae	Shrub	1	2	3	LC
Spur-Winged Lapwing	*Vanellus spinosus*	Charadriidae	Shrub	1	0	1	LC
Bronze Mannikin	*Lonchura cucullata*	Estrildidae	Shrub	2	30	32	LC
Red-Eyed Dove	*Streptopelia semitorquata*	Columbidae	Shrub	3	1	4	LC
Scarlet-Chested Sunbird	*Chalcomitra senegalensis*	Nectariniidae	Shrub	3	0	3	LC
Yellow-Backed Weaver	*Ploceus melanocephalus*	Ploceidae	Shrub	3	0	3	LC
Black Saw-Wing	*Psalidoprocne pristoptera*	Hirundinidae	Shrub	5	0	5	LC
Common Bulbul	*Pycnonotus barbatus*	Pycnonotidae	Shrub	6	3	9	LC
Long-Tailed Cormorant	*Microcarbo africanus*	Phalacrocoracidae	Shrub	6	0	6	LC
Red-Cheeked Cordon-Bleu	*Uraeginthus bengalus*	Estrildidae	Shrub	7	0	7	LC
African Pied Wagtail	*Motacilla aguimp*	Motacillidae	Shrub	14	8	22	LC
Grey-Headed Sparrow	*Passer griseus*	Passeridae	Shrub	14	8	22	LC
Cattle Egret	*Bubulcus ibis*	Ardeinae	Shrub	15	15	30	LC
African Firefinch	*Lagonosticta rubricate*	Estrildidae	Shrub	0	4	4	LC
African Grey Hornbill	*Lophoceros nasutus*	Bucerotidae	Shrub	0	1	1	LC
African Mourning Dove	*Streptopelia decipeens*	Columbidae	Shrub	0	3	3	LC
African Moustached Warbler	*Melocichla mentalis*	Macrosphenidae	Shrub	0	14	14	LC
African Paradise-Flycatcher	*Terpsiphone viridis*	Monarchidae	Shrub	0	1	1	LC
African Pygmy Kingfisher	*Ispidina picta*	Alcedinidae	Shrub	0	1	1	LC
Blue-Breasted Kingfisher	*Halcyon malimbica*	Alcedinidae	Shrub	0	1	1	LC
Blue-Naped Mousebird	*Urocolius macrourus*	Coliidae	Shrub	0	1	1	LC
Common Quail	*Coturnix coturnix*	Phasianidae	Shrub	0	1	1	LC
Familiar Chat	*Cercomela familiaris*	Muscicapidae	Shrub	0	1	1	LC
Grey Heron	*Ardea cinerea*	Ardeidae	Shrub	0	1	1	LC
Grey-Backed Camaroptera	*Camaroptera brachyuran*	Cisticolidae	Shrub	0	1	1	LC
Grey-Backed Fiscal	*Lanius excubitoroides*	Laniidae	Shrub	0	3	3	LC
Red-Cheeked Cordon-Bleu	*Uraeginthus bengalus*	Estrildidae	Shrub	0	2	2	LC
Ruppell's Longtailed Starling	*Lamprotornis purpuroptera*	Sturninae	Shrub	0	6	6	LC
Semi-Collared Flycatcher	*Ficedula semitorquata*	Muscicapidae	Shrub	0	1	1	LC
Snowy-Headed Robin-Chat	Cossypha niveicapilla	Muscicapidae	Shrub	0	1	1	LC
Speckled Mousebird	*Colius striatus*	Coliidae	Shrub	0	5	5	LC
White-Browed Coucal	*Centropus superciliosus*	Cuculidae	Shrub	0	2	2	LC
Total	**38**	**26**	**1**	**85**	**139**	**224**	**2**

*IUCN redlist status, where applicable: EN-Endangered, VU-Vulnerable, NT-Near Threatened, LC: Least Concern. Avian count methods, where applicable: TC-Transect Counts, TSC-Timed Species Counts.

4.3 Ngwedo-Bikorongo-Ndandamire Road

The avian species assessment along the Ngwedo-Bikorongo-Ndandamire road documented 26 species of birds belonging to 17 families. The commonly sighted birds were the; Common Bulbul, *Pycnonotus barbatus* (n=24) Bronze Mannikin, *Lonchura cucullata* (n= 23) and the Ruppell's Longtailed Starling, *Lamprotonis purpuroptera* (n= 21) while the dominant families included the *Muscicapidae* (4), *Estrildidae* (3) and *Coliidae* (2) during the avifauna assessment. Shrubs were identified as the only habitat preference for all the birds.

None of the avian species recorded along the proposed Ngwedo-Bikorongo-Ndandamire road are threatened (**Table 4**). It therefore emerged that all the bird species were of Least Conservation concern when crosschecked with the IUCN red list in **Table 4**.

Table 4: List of bird species present along the Ngwedo-Bikorongo-Ndandamire road

Common Name	Scientific Name	Family	Habitat	Frequency and method			IUCN Status
				TC	TSC	Total	
African Moustached Warbler	*Melocichla mentalis*	Macrosphenidae	Shrub	1	0	1	LC
Black-Headed Gonolek	*Laniarius erythrogaster*	Malaconotidae	Shrub	7	13	20	LC
Blue-Naped Mousebird	*Urocolius macrourus*	Coliidae	Shrub	1	0	1	LC
Bronze Mannikin	*Lonchura cucullata*	Estrildidae	Shrub	1	22	23	LC
Brown-Crowned Tchagra	*Tchagra australis*	Malaconotidae	Shrub	2	4	6	LC
Common Bulbul	*Pycnonotus barbatus*	Pycnonotidae	Shrub	8	16	24	LC
Familiar Chat	*Cercomela familiaris*	Muscicapidae	Shrub	2	1	3	LC
Grey-Back Camaroptera	*Camaroptera brachyuran*	Cisticolidae	Shrub	1	0	1	LC
Grey-Backed Fiscal	*Lanius excubitoroides*	Laniidae	Shrub	4	0	4	LC
Grey-Throated Flycatcher	*Myioparus griseigularis*	Muscicapidae	Shrub	1	0	1	LC
Pin-Tailed Whydah	*Vidua macroura*	Viduidae	Shrub	1	0	1	LC
Red-Cheeked Cordon-Bleu	*Uraeginthuqs bengalus*	Estrildidae	Shrub	1	0	1	LC
Ruppell's Longtailed Starling	*Lamprotornis purpuroptera*	Sturnidae	Shrub	18	3	21	LC
Speckled Mousebird	*Colius striatus*	Coliidae	Shrub	3	3	6	LC
Speckle-Fronted Weaver	*Sporopipes frontalis*	Ploceidae	Shrub	1	0	1	LC
Yellow-Rumped Tinkerbird	*Pogoniulus bilineatus*	Lybiidae	Shrub	2	0	2	LC
African Dusky Flycatcher	*Muscicapa adusta*	Muscicapidae	Shrub	**0**	1	1	LC
African Mourning Dove	*Streptopelia decipiens*	Columbidae	Shrub	0	1	1	LC
Blue-Spotted Wood Dove	*Turtur afer*	Columbidae	Shrub	0	1	1	LC
Cinnamon-Chested Bee-Eater	*Merops oreobates*	Meropidae	Shrub	**0**	1	1	LC
Yellow-Backed Weaver	*Ploceus melanocephalus*	Ploceidae	Shrub	0	1	1	LC
Grey-Headed Sparrow	*Passer griseus*	Passeridae	Shrub	0	2	2	LC
Semi-Collared Flycatcher	*Ficedula semitorquata*	Muscicapidae	Shrub	0	2	2	LC
Red-Cheeked Cordon-Bleu	*Uraeginthus bengalus*	Estrildidae	Shrub	0	5	5	LC
African Pied Wagtail	*Motacilla aguimp*	Motacillidae	Shrub	0	6	6	LC
Helmented Guineafowl	*Numida meleagris*	Numididae	Shrub	0	15	15	LC
Total	**26**	**17**	**1**	**54**	**97**	**151**	**1**

*IUCN redlist status, where applicable: EN-Endangered, VU-Vulnerable, NT-Near Threatened, LC: Least Concern. Avian count methods, where applicable: TC-Transect Counts, TSC-Timed Species Counts.

Mitigation measures

Prior to construction, the Contractors will be guided by the ARSDP Environmental Safeguard Specialists to develop the Contractor's Social and Environmental Action Plan (CSEAP). The Contract will also recruit the Environment Officer who will be inducted into monitoring and reporting avian species along the proposed roads. The remuneration costs of the Environment Officer is included in the ESMMP. In addition, the ARSDP Project Environmental Specialist and the Buliisa District Environmental Officers shall undertake monthly field visits to enforce the implementation of ESMMP by the Contractor. The costs of monitoring are embedded in the ESMMP.

5. Avian Monitoring and Mitigation Plan (AMMP)

Valued Avian component	Potential impact	Mitigation measures and costs					Monitoring					
		Mitigation measure	**Frequency of mitigation**	**Implementation timing**	**Responsible agency**	**Budget (UgX)**	**Indicators**	**MoV**	**Monitoring activities**	**Frequency**	**Monitoring costs**	**responsibility**
Habitats	Destruction and disturbance of avifauna nests during vegetation clearance	Tree replanting and vegetation restoration	Quarterly	Before start of works	Contractor Buliisa DLG	45,000,000	No. of trees of same species replanted	Tree planting and restoration reports	Review of reports, field visits	quarterly	9,000,000	PST/ARSDP, DLG, NEMA, UWA, MWE
		Habitat monitoring studies	Bi-annually	During construction	Buliisa DLG, PST/ARSDP	20,000,000	No. habitat assessment conducted	Avifauna habitat assessment reports	Review of reports, field visits	Bi-annually	6,000,000	PST/ARSDP, DLG, NEMA, UWA, MWE
Birds	Excess noise, dust and habitat clearance affects the breeding, roosting and feeding activities of birds	Manage noise levels by sensitizing workers, avoid idling of running equipment	Daily	During construction	Contractor	9,000,000	Noise levels at the construction site	Noise level reports	Review of reports, field visits, noise level tests	Monthly	4,500,000	PST/ARSDP, DLG, NEMA, UWA, MWE
		Minimize dust by sprinkling water	Daily	During construction	contractor	12,000,000	No. of water bouzers used per day per kilometr of road under construction	Water sprinkling reports	Review of reports, field visits	Monthly	4,500,000	PST/ARSDP, DLG, NEMA, UWA, MWE
		Rqular avifauna monitoring studies	Bi-annually	During construction	Buliisa DLG, PST/ARSDP	20,000,000	No. habitat assessment conducted	Avifauna habitat assessment reports	Review of reports, field visits	Bi-annually	6,000,000	PST/ARSDP, DLG, NEMA, UWA, MWE
Total						**61,000,000**					**30,000,000**	

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APPENDIX 5.2: HERPETOFAUNA ASSESSMENT

APPENDIX 5.2: Herpetofauna assessment report

BASELINE HERPETOFAUNA ASSESSMENT FOR THE PROPOSED GRAVEL ROADS UPGRADE SUB-PROJECTS IN BULIISA DISTRICT UNDER THE ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT, MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Herpetofauna Specialist Report

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1.0 Introduction

The Ministry of Lands, Housing and Urban Development in collaboration with Buliisa and Hoima Districts is implementing the Albertine Region Sustainable Development Project. The project involves upgrade of infrastructure.

Since the roads to be upgraded traverses woodlands, wetlands, tree plantations and forest reserves some impacts are anticipated to happen. Under the Uganda National Environmental Statute No.4 of 1995, it is a legal requirement for development projects to conduct Environmental Impact Assessments. The studies are required in order to determine the possible environmental impacts of a proposed project or activity and propose measures to mitigate any such impacts.

This report focuses on the herpetofauna of the areas where the road upgrade is going to be undertaken and it is part of the wider Environment and Social Impact Assessment study. The study was conducted between 13th and 25th August, 2017.

The aim for conducting the herpetofauna baseline study was to conduct an inventory of the herpetofauna species that occur in the areas where the road upgrade is going to take place. The inventory results would then guide the identification of impacts and consequently their mitigation measures to avoid herpetofauna being negatively impacted.

2.0 Objectives of the baseline study

The objectives of the herpetofauna survey were to:

- To determine the herpetofauna species diversity (generating herpetofauna species list),
- To identify species of conservation concern of amphibians and reptiles in and around the project area,
- To establish the impact the road construction activities will have on the herpetofauna of the area.

3.0 The Value of Using Herpetofauna (specifically Amphibians) in Bioassessments

Amphibians are of particular ecological importance in wetland ecosystems and can perform a significant function in landscape assessments. Amphibians serve as vital links in food webs and between wetland and upland habitats. Specific advantages of using amphibians in bioassessments include:

1. Sensitivity. Because of their unique physiology and habitat requirements, amphibians are often regarded as more exposed and potentially more vulnerable to changes in their environment than many other vertebrates (Sparling et al. 2000). Amphibians response to factors such as habitat fragmentation, hydrologic modifications, alterations in water chemistry, water and airborne contamination, and large-scale climatic variation. This is exacerbated by production of embryos in clear, unprotected jelly egg-masses; thin, highly permeable skin exposed to water and the atmosphere; and their limited dispersal and home ranges.

2. Complex life history. Wetland-breeding amphibians exhibit complex life histories, often undergoing dramatic and irreversible morphological and physiological change from sedentary eggs, to free swimming aquatic larvae, to semiaquatic or terrestrial adults. Especially because of their utilization of wetland/upland transitional areas, members of this class are appropriate for assessing impacts on these habitats.
3. Amphibians have been recognized as good indicators of habitat change than other vertebrates because: 1) changes in habitat are reflected in changes in their numbers and species diversity within

a short time, and 2) The geographical ranges of amphibians are smaller than those of other vertebrates (Bibby, 1992).

4. Most reptiles on the other hand are highly mobile and are diversified in habitats and can be encountered in aquatic habitats, shorelines, rocky outcrops, trees and bushes and on any slopes of the terrain. The more specialized in habitat use such as crocodiles, monitor lizards and water snakes are good indicators for monitoring changes in a habitat due to human activity.

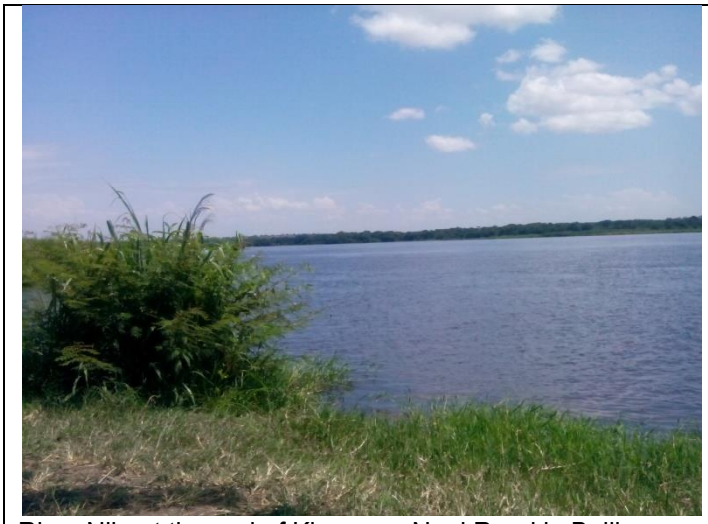
4.0 Scope of work

The scope of work included conducting a herpetofauna biodiversity inventory along and around the roads proposed for upgrade, and later figure out the impact the road construction activities on the herpetofauna.

5.0 Project Area

The habitat in the project area is currently under heavy degradation for agricultural and grazing activities. The project areas are located in Buliisa and Hoima Districts of Uganda. Most of the project Area is a modified habitat that is settled and cultivated. Most of Buliisa is composed of communal land used for grazing. Most of the land here is used for grazing and a few areas are indeed cultivated. There are different habitats that could harbor herpetofauna. The habitats include the following:

5.1 Rivers / streams



River Nile at the end of Kisomere-Nuel Road in Buliisa District, (36 N 0333523, 0248635)

5.2 Ponds and Pools

Several ponds and or pools occur along the roads or in the roads. These ponds and pools are created by rain water whenever it rains. They have acted as sources of breeding. Some of them have turned out to be permanent occurring even during the dry seasons.

Pool of water on proposed Kibuukwa–Bugana Main Road, in Kijangi village Buliisa District, (36 N 0329060, 0232384)

Ponds created by road construction activities, Several of these occur along the Roads. This particular one is at Bugana on Buliisa-Bugana Road, in Buliisa District. (36 N 0333056, 0229122)

5.3 Tree Plantations or woodlots

Several tree plantations or woodlots occur in the project area. Some are immediately along the road falling in the road corridors while some are far off the road corridor.

5.4 Seasonal and Permanent Wetlands

5.5 Riverine Forests

5.6 Settlements and Trading Centres

Kabolwa Trading Centre on Kisiabi-Kabolwa Road, Buliisa District. (36 N 0324374, 0223096)

5.7 Gardens / Farmlands

Cassava gardens

Cotton Garden

Cassava & Maize gardens between (36 N 0332902, 0245381 & 36 N 0333445, 0246222)

6.0 Methodology

The survey of the herpetofauna was conducted using a combination of standardized Visual Encounter Surveys, Audio Encounter Surveys, and Dip netting, as described by Heyer et al, 1994; Fellers and Freel, 1995; Halliday, 1996; and Olson, et al, 1997. Literature was also reviewed and informal community consultations conducted. In each of the investigated areas linear transects of 300 – 500 m where established and sampled during day time and at night between 9am to 12 o'clock, 3pm to 5pm, and 8pm to 11 pm. Thirty seven Transects where established along the entire stretch of the road.

6.1 Visual Encounter Surveys (VES)

Visual encounter surveys involves walking through an area or established transect or quadrant, looking out for herpetofauna and recording any herpetofauna encountered or seen. For this assessment, visual encounter surveys were conducted along transects, searching for amphibians and reptiles for two man hours per site per sampling. The visual searches included examination of hiding places such as under logs, crevices, stones, leaf litter, and crevices. Herpetofauna species detected by sight and their numbers were recorded. Transect walks were conducted both during day and at night.

6.2 Audio Encounter Surveys (AES)

AES exploit the species-specific behavior of male amphibians in reproductive condition making distinctive species-specific vocalization or calls to advertise their positions to potential mates and rivals. The method involved walking through an established transect listening attentively for amphibian vocalization or calls. The identity of the amphibian species heard calling and their numbers were recorded. The counts were then used to estimate or determine: (1) relative abundance of calling males, and (2) species composition.

6.3 Dip netting

Some herpetofauna are more aquatic than others, spending most of their time in water. For these, dip netting was used in ponds, pools, streams and other water collection points.

6.4 Specimen treatment, collection and Preservation

Apart from individuals heard calling, species encountered were handpicked, identified, and where possible photographed and released at the point of capture. Individuals whose identity was not easy to determine in the field, were taken as specimens and preserved in 10% alcohol, for later submission to a Museum to determine the species identity.

6.5 Red Data/Protected Species Analysis

Standard reference books were consulted in the identification of the herpetofauna encountered. They include; Schiotz (1972), Schiotz (1972b), De Witte (1937), Drewes (1984), Drewes and Vindum (1994), Loveridge, (1957). Welch (1982), Stewart (1967) and Wager (1965).

The nomenclature of amphibians follows Channing & Howell (2006), that of reptiles Spawls et al. (2002).

To assess the conservation status of species recorded or potentially occurring in the study area, the following sources were consulted:

- International Union for the Conservation of Nature (IUCN) Red List of Threatened Species (2014.2), and;
- The Draft National Red List for Uganda January 2016, by Wildlife Conservation Society (WCS)

7.0 Results of Literature Review

7.1 Policies and Regulations that affect Herpetofauna

Uganda has signed and / or ratified several international agreements relating to the environment, both global and regional. Uganda has also enacted National Laws and Regulations that government Environment at the National Level. Agreements of potential importance to Herpetofauna are briefly discussed below;

7.1.1 National Policies and Regulations

Relevant Ugandan Acts and Laws and Applicability

Legislation	**Overview**	**Applicability to Herpetofauna**
The National Environment Act Cap 153	The third schedule of the Act lists projects to be considered for Environmental and Social Impact Assessment (ESIA). The third Schedule of the Act under section 3 address development of major roads, as projects for which ESIA is mandatory	Need to establish how Herpetofauna will be affected by the road project.
The Uganda Wildlife Act, Cap 200, 2000	The purpose of the Act 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, in order to support sustainable utilization of wildlife for the benefit of the people of Uganda, the sustainable management of wildlife conservation areas, the conservation of selected examples of wildlife communities in Uganda, the protection of rare, endangered and endemic species of wild plants and animals, the implementation of relevant international treaties, conventions, agreements or other arrangement to which Uganda is a party; and Public participation in wildlife management	The project area is part of the Albertine Rift and area important for its biodiversity richness and endemism. Uganda has ten species of herpetofuana of conservation concern and all occur in Albertine Rift.
The Prohibition Of The Burning Of Grass Act, 1974	It's an act that provides for the prohibition of the burning of grass in Uganda and for other matters connected therewith. Section (2) of this Act prohibits the burning of grass by any person in all areas of Uganda. Section (3) grants powers to burn grass in Sub County Chief, Veterinary officer, Forest officer of a forest department not below a rank of a forest ranger, and UWA officer in case in a National park or any conservation area.	Contractors and their labor force need to bear this in mind. Burning results in mortality of amphibians and reptiles in the wild
The Water Act Cap, 152, 1997	The Act provides for the use, protection and management of water resources and supply in Uganda. Section 31, Sub-section (1) of the Water Act deals with prohibition of pollution to water and stipulates that a person commits an offence.	There are many Wetland systems with within the project area. Pollution and waste disposal have been

	Under Section 107, the Water Resources Regulations of 1998; Water (Waste Discharge) Regulations (1998); the Water Supply Regulations (1999) and the Sewerage Regulations (1999) have been put in place to implement the Act and are aimed at minimizing pollution of public waters by developers and other users. According to Regulation 4 (1) of the Water (Waste Discharge) Regulations (1998): '*No person shall discharge effluent or waste on land or into aquatic environment contrary to the standards established regulation 3; unless he or she has a permit in the format specified in the First Schedule issued by Director of DWRM*.'	reported to affect the survival of herpetofauna. Any disposal of waste shall need to be in line with the waste discharge regulations; asphalt roads usually involve the use of oil based solvents; management of these is significant to maintaining water quality
The National Environment (Wetlands, River banks and Lakeshores Management) Regulations, 2000	Section 12 (1) of the regulations provides that '*subject to the provisions of these regulations, a person shall not carry out any activity in a wetland without a permit issued by the Executive Director*.' Section 23 (1) (a) of the regulations points out that a person who intends to '*use, erect, reconstruct, place, alter, extend, remove or demolish any structure or part of any structure in, under, or over the river bank or lake shore*;' shall make an application to the Executive Director (of NEMA) in form A set out in the First Schedule to these regulations. The regulations in Section 34 also provides that '*a developer desiring to conduct a project which may have a significant impact on a wetland, river bank or lake shore, shall be required to carry out an environmental impact assessment in accordance with Sections 20, 21 and 22 of the National Environment Act*'.	Several wetlands occur in the project area. Wetlands are Important habitats for herpetofauna, where they breed and survive from.
The National Environment (Waste Management) Regulations, 1999	These regulations require waste disposal in a way that would not contaminate water, soil, air or impact public health. This is in relation to onsite waste storage, haulage and final disposal. According to the regulations, hazardous waste haulage and disposal should be done by licensed entities. Wastes considered to be hazardous are listed within these regulations	Waste will be generated during road construction in form of medical waste or oil contamination. Waste impacts Herpetofauna negative by interfering with their reproduction, etc.
National Environment (Standards for Discharge of Effluent into	These regulations provide standards for effluent discharge. Section 6 (2) detail maximum permissible limits for 54 regulated contaminants, which must not be exceeded before effluent is discharged into water or on land.	Effluent discharge pollute water, which result in interference with health of herpetofauna

Water or on Land) Regulations, 1999		
The National Environment (Noise Standards and Control) Regulations, 2003	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 levels. The maximum permissible noise levels for impact or impulsive noise is 140 dBA for 100 impulses, 130dBA for 1,000 impulses and 120dBA for 10,000 impulses. The maximum permissible noise levels for environment or recreational sites is 45 dBA (Leq) during the day and 35 dBA (Leq) during the night. The regulations require that persons exposed to occupational noise exceeding 85 dBA for 8 hours should be provided with requisite ear protection.	Research has revealed that noise interfere with Herpetofauna survival.
The Land Act, Cap 227, of 1998	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 good of the citizens of Uganda. Part II of this Act addresses forms of land holding. Part III addresses control of land use. Section 43 specifically addresses the utilisation of land in accordance with the various statutes and acts of environmental concern, which include the National Environment Act, The Water Act, The Wildlife Act, and any other law. In addition Section 45 addresses the control of environmentally sensitive areas.	Part of the land to be affected by the proposed project are areas where amphibians breed and survive. Care must be taken not to impact the herpertofauna negatively.

7.1.2 International Agreements and Regulations

7.1.2.1 CITES Convention

The convention on international Trade in Endangered Species of Wild Fauna and Flora (CITES) has been ratified by Uganda and seeks to ensure that the International trade in species of wild fauna and flora does not threaten survival in the wild of the species concerned. Species on the CITES lists are considered of conservation concern.

7.1.2.2 Ramsar Convention

Uganda has ratified the convention on wetlands of International Importance especially as waterfowl Habitat (Ramsar Convention). All the Ugandan sites on the Ramsar list will not be affected by the Project. There are a number of wetland patches that exist within the project area though. Most of them have been degraded for agricultural purposes. A few relatively natural wetland patches remain. The fact that the areas in Buliisa is

flat, seasonal flooding normally takes place. The floods generate ponds or pools of water some of which stay for long time and form breed grounds for amphibians. Some wetlands exist within the direct impact zone or indirect impact zone of the project.

7.1.2.3 The African Convention on the Conservation of Nature and Natural Resources

Uganda has ratified the African Convention on the Conservation of Nature and Natural Resources (1968), signed the Protocol Agreement on the Conservation of Common Natural Resources (1982) and the Lusaka Agreement of co-operative Enforcement and Operations Directed at Illegal Trade in Wild Fauna and Flora (1994).

7.1.2.4 Donors and Financing Institutions

The World Bank Operational Policy on Natural Habitats (OP. 4.04) requires borrower countries to conserve fragile ecosystems such as wetlands, rivers, lakeshores, forests, rocks, and other landscapes for sustainability of the habitats for various species such as herpetofauna.

7.2 Species Richness

The roads proposed for upgrade lie within the Albertine Rift, an area that is rich in biological diversity. Literature review revealed that eleven other species of Amphibians (Appendix I) and thirty three (33) species of Reptiles Appendix II potentially occur in the project area. The publications review included Spawls S. et al. 2008, Bill Branch 2005, and the National Red List for Uganda 2016 published by WCS. The National Data Bank at Makerere University was also consulted.

7.3 Characteristics of Roads, Amphibians and Reptiles that influence Road effects

7.3.1 Characteristics of Amphibians and Reptiles That Influence Susceptibility to Road Effects

Amphibians and reptiles possess a variety of biological characteristics that influence their vulnerability to road effects. Factors influencing the frequency, speed, distance, and timing of movements can increase susceptibility to direct road mortality.

- The response to seasonal changes for example rainfall may influence movement of amphibians as they have to move from one breeding ground to the other. Females respond to calling males.
- Skin permeability exposes them to chemical pollutants and desiccation.
- Body heat derived primarily from external sources
- Behavioral responses to light and noise can increase susceptibility to indirect effects.
- The habitat requirements of amphibians and reptiles vary seasonally; therefore the distribution of resources across the landscape relative to roads can influence mortality.
- An individual's vulnerability to road mortality is influenced by dispersal ability as well as the spatial scale and frequency of movements.
- Several other behaviors and characteristics may also increase susceptibility to road related mortality. For example, some species of snakes may be attracted to road surfaces to thermoregulate (Klauber 1939, Sullivan 1981; Ashley and Robinson 1996) and some species of toads may use roads under streetlights to forage for insects (Neill 1950).

The indirect effects of roads on amphibians and reptiles via changes in microenvironmental conditions are influenced by such biological characteristics as ectothermy and skin permeability. Changes in thermal and moisture characteristics in the area altered by roads and traffic may prevent amphibians and reptiles from occupying roadside habitat or crossing roads. Amphibians are potentially limited by the

microhabitat variables of canopy and litter cover (deMaynadier and Hunter 1998). In addition, amphibians are sensitive to the various toxic substances (emitted from vehicles or associated with road maintenance) that are soluble in fatty tissues and to heavy metals that may accumulate in their bodies. Exposure to these compounds could alter reproduction and have lethal effects in the long term (Lodé 2000).

7.3.2 Characteristics of Roads that make Amphibians and Reptiles Susceptibility to Impacts

Roads are major features of most landscapes that impose an array of ecological effects.
A variety of road characteristics need to be considered to understand what the potential effects on amphibians and reptiles and their populations might be, including the activities involved in road construction, the type of road, traffic volume, the road density in the area of interest, the spatial and environmental context of the roads, and the presence and characteristics of road-crossing structures.

- Road construction results in habitat loss and alteration and may incur direct mortality or physical injury to any sessile or slow-moving organism within the path of the developing road (Trombulak and Frissell 2000). Goodman and colleagues (1994) reported that a large number of radiated tortoises (Geochelone radiata) fell down a steep embankment adjacent to an unfinished road in Madagascar. They were unable to escape and consequently died from exposure to sun, heavy rainfall, and human collection.
- The timing of road construction activities may have a large influence on their effects because of large seasonal differences in the movement patterns and habitat use of some amphibians and reptiles.
- Construction may also result in the loss of certain habitat features, such as exposed rocky areas, that previously supported lizards and snakes and their prey base (Smith and Dodd 2003).
- Studies suggest that low traffic volumes may be sufficient to cause high levels of amphibian mortality, but generally the mortality rate increases with traffic volume. A flow of 10 vehicles per hour resulted in 30% mortality of females in a population of common toads (Bufo bufo) migrating across a road to and from a breeding pond in the Netherlands (Van Gelder 1973). Several other studies concluded that mortality risk for amphibians was positively correlated with an increase in traffic intensity (Hels and Buchwald 2001; Joly et al. 2003).
- Individuals may start basking within the right of way (Smith and Dodd (2003). In addition, roads facilitate an increased use of surrounding habitats by humans, future development of an area, and the hunting and collection of amphibians and reptiles.
- Road placement within the landscape can also influence road-kill locations, rates, and species presence. For example, the expanding literature indicates that road placement within the vicinity of wetlands and ponds may result in associated high rates of road mortality (Ashley and Robinson 1996; Fowle 1996; Forman and Alexander 1998; Smith and Dodd 2003).

7.4 Documented Impacts on Herpetofauna by Road Projects

There are a number of road characteristics that can potentially affect amphibians and Reptiles, both directly and indirectly. The characteristics include construction activities, road type, the overall road density in an area, and traffic level and patterns. Direct effects are considered to involve injury or mortality occurring during road construction (e.g., inadvertent burial or death from construction activities and blasting) or subsequent physical contact with vehicles. Indirect effects include habitat loss, fragmentation, and alteration. It may be changes in temperature, moisture, light, noise, pollutants, or quality of available habitat. Such changes may influence the behavior, survival, growth, and reproductive success of individual herpetofauna. For example,

increases in the noise and light levels may disorient the individuals, by obscuring cues necessary to follow certain paths, thus interfering with access to cover, food, and mates.

The summed direct and indirect effects on individual animals may have population-level consequences (e.g., size, spatial structure, and persistence). Similarly, the summed effects on different species may influence the overall number of species in an area (i.e., species richness). These effects may be especially problematic when they affect sensitive, threatened, or endangered species or interfere with important ecosystem processes.

7.4.1 Direct Effects: Road Mortality

The most evident effect of roads on wildlife is mortality inflicted by vehicles. Numerous studies have investigated road-induced mortality of amphibians and reptiles based on road-transect surveys. This mortality primarily occurs as these animals move between habitat patches (Ehmann and Cogger 1985). A review of road surveys conducted in central Europe, reported that amphibian road kills were observed more frequently than road-kills of four other vertebrate taxa (Puky 2003). No such studies, documenting mortality of amphibians and reptiles on roads have been conducted in Uganda.

7.4.2 Indirect Effects of Roads via Habitat Changes

- Roads affect wildlife indirectly through fragmentation of the landscape and alteration of physical conditions in the vicinity of roads (Forman et al. 2003). The data suggest that the combined effects (thermal, hydrological, chemical and material pollutants, sediments, noise, invasion of roadside species, and human access affecting wildlife, fire, and sensitive habitats) extend outward for greater than 100 meters from the road edge.

- Certain species may benefit from edge habitat generated through fragmentation. Edge refers to the transition zone between original habitat and the matrix of altered habitat adjacent to it (Mitchell and Klemens 2000). Based on transect surveys and radio telemetry data, Klingenböck et al. (2000) discovered that lizards were abundant along forest edges among fallen trees with home-range centers located close to clearings used for thermoregulation. Individuals selectively used clearings adjacent to roads.

- Indirect impacts from road construction, such as runoff, hydrological changes, and sedimentation may occur beyond the immediate vicinity of road placement (Jones and Grant 1996). The sensitivity of amphibians, and in some instances reptiles, to surrounding environments has led to the suggestion of these taxa as indicators of environmental health (Gibbons et al. 2000). For example, Mahaney (1994) found that petroleum contamination inhibited tadpole growth and prevented metamorphosis.

- Discharge diverted from roads may impact flow velocities, and the extent, depth, and frequency of flooding, all hydrologic factors that influence embryonic survival and breeding success of amphibians (Richter 1997). Additionally, Richter and Azous (1995) found that wetlands experiencing water level fluctuations of greater than 20 cm and flow velocities greater than 5.0 cm/sec had lower amphibian richness.

- Several additional studies have documented reductions of amphibian densities or populations of their invertebrate prey in streams experiencing sediment loading from roads (Richter 1997; Welsh and Ollivier 1998; Semlitsch 2000).

- Maintenance activities associated with roads and surrounding edges may indirectly impact amphibians and reptiles. A few studies have investigated the potential effects that chemical application to road surfaces have on salamanders. In New Hampshire, embryonic survivorship of spotted salamanders was significantly lower within roadside pools compared to woodland pools (Turtle 2000). Studies have also concluded that road-side mowing has negative impacts on surrounding snake populations (massasauga, (Seigel 1986); and plains garter snake, (Dalrymple and Reichenbach 1984)) and recommended that managers schedule such operations to coincide during periods of inactivity for the animals. Mowing not only incurs direct mortality of individuals, but reduces cover availability, soil moisture, and prey densities, often rendering the habitat unsuitable for certain species (Kjoss and Litvaitis 2001).

- Amphibians and reptiles suffered physiological and behavioral hearing loss and misinterpretation of environmental acoustical signals when exposed to off-road vehicle noise (Brattstrom and Bondello 1983). Background noise often results in modification of calling behavior in males and may impair the ability of females to discriminate among call types and to discern location of calling males during breeding migrations (Schwartz and Wells 1983; Schwartz et al. 2001).

- Exposure to artificial light can cause nocturnal frogs to suspend normal foraging and reproductive behavior and remain motionless long after the light has been removed. (Buchanan 1993). Olfaction plays a primary role in amphibian migration and orientation (Duellman and Trueb 1986; Oldham 1967) and it is possible that environmental cues may be obscured by emissions or runoff from vehicles, or from characteristics of the road substrate (Shine et al. 2004).

8.0 Results from the Field Survey

8.1 Species Occurrence

8.1.1 Amphibians

8.1.1.1.1 Buliisa-Bugana Road

Nine (9) Amphibian species where recorded in the areas sampled along the Road. Eight were frogs, while One was a toad. Based on the IUCN (year 2016) Red List none of the species recorded is of conservation concern, all are listed as of Least Concern. Three of the species is listed as Data Deficient according to the National Red List for Uganda published by Wildlife Conservation Society (WCS) 2016. Those listed as data deficient include the Mascarene Rocket Frog *Ptychadena mascareniensis*, Common Reed Frog *Hyperolius viridiflavus*, and striped leaf-folding frog *Afrixalus quadrivittatus*. Four of the species recorded are wetland specialists namely; Dwarf Puddle Frog *Phrynobatrachus mababiensis,* Common Reed Frog *Hyperolius viridiflavus*, Eastern Groove-Crowned Bullfrog *Hoplobatrachus occipitalis*, and Striped Leaf-folding Frog *Afrixalus quadrivittatus*. The four thrive in and around permanent water sources. A full list is shown in table 2 below.

Table 2 showing the diversity of amphibians recorded along Buliisa Bugana road

Family Name	Scientific Name	Common Name	IUCN Conservation Status	National Red List Conservation Status
Phrynobatrachidae	*Phrynobatrachus natalensis*	Natal Puddle Frog	LC	
Phrynobatrachidae	*Phrynobatrachus mababiensis*	Dwarf Puddle Frog	LC	
Dicroglossidae	*Hoplobatrachus occipitalis*	Eastern Groove-crowned Bullfrog	LC	
Ptychadanidae	*Ptychadena mascareniensis*	Mascarene Rocket Frog	LC	DD
Ptychadenidae	*Ptychadena anchietae*	Anchieta's Rocket Frog	LC	
Hyperoliidae	*Hyperolius viridiflavus*	Common Reed Frog	LC	DD
Hyperoliidae	*Afrixalus quadrivittatus*	Striped Leaf-folding Frog	LC	DD
Hyperoliidae	*Kassina senegalensis*	Senegal Kassina	LC	
Bufonidae	*Sclerophyrs regularis*	Square-marked Toad	LC	

LC – Least Concern, DD – Data Deficient

8.1.1.1.2 Ngwedo-Bikongoro-Ndandamire Road

Because of the absence of wet points along the proposed road. No amphibian was recorded on the proposed route. It requires a longer time to establish the availability of toads in the area. This can only happen in rainy season. By the time of the visit there was no rain in the area.

8.1.1.1.3 Kisiabi-Kabolwa Road

Eleven (11) Amphibian species where recorded in the areas sampled along the Kisiabi-Kabolwa road. The species include two toads and nine frogs. Four of the frogs are tree frogs of family Hyperoliidae. Six of the species recorded are wetland specialists which thrive in and around permanent water sources. These are Dwarf Puddle Frog *Phrynobatrachus mababiensis,* Natal Puddle Frog *Phrynobatrachus natalensis*, Kivu Reed Frog *Hyperolius kivuensis*, Common Reed frog *Hyperolius viridiflavus*, Eastern Groove-Crowned Bullfrog *Hoplobatrachus occipitalis*, and Striped Leaf-folding Frog *Afrixalus quadrivittatus*. The toads are more adaptable to dry conditions and can thrive where seasonal water sources exist. None of the species recorded is listed under the IUCN Red List of threatened species and Uganda National Red List of Threatened species as being conservation concern. All are listed as being Least Concern. A full list is shown in table 3 below. Three of the species are listed as Data Deficient under the National Red List for Uganda published by Wildlife Conservation Society 2016.

Table 3 shows the diversity of amphibians recorded along Kisiabi-Kabolwa road

Family Name	Scientific Name	Common Name	IUCN Conservation Status	National Red List Conservation Status

Phrynobatrachidae	*Phrynobatrachus natalensis*	Natal Puddle Frog	LC	
Phrynobatrachidae	*Phrynobatrachus mababiensis*	Dwarf Puddle Frog	LC	
Dicroglossidae	*Hoplobatrachus occipitalis*	Eastern Groove-crowned Bullfrog	LC	
Ptychadanidae	*Ptychadena mascareniensis*	Mascarene Rocket Frog	LC	DD
Ptychadenidae	*Ptychadena porosissima*	Grassland Rocket Frog	LC	
Hyperoliidae	*Hyperolius kivuensis*	Kivu Reed Frog	LC	
Hyperoliidae	*Hyperolius viridiflavus*	Common Reed Frog	LC	DD
Hyperoliidae	*Afrixalus quadrivittatus*	Striped Leaf-folding Frog	LC	DD
Hyperoliidae	*Kassina senegalensis*	Senegal Kassina	LC	
Bufonidae	*Sclerophyrs steindachneri*	Steindachner's Toad	LC	
Bufonidae	*Sclerophyrs kisoloensis*	Kisolo Toad	LC	

LC – Least Concern, DD – Data Deficient

8.1.1.2.8 Pictures of Some Amphibians Encountered

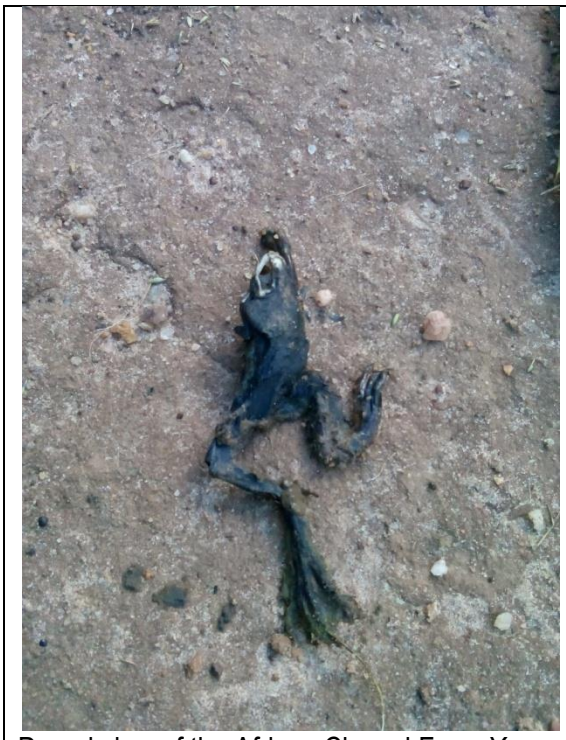
Plate 1 below shows some of the amphibian species that were encountered during the herpetofauna survey.

Eastern Groove-crowned Bullfrog, *Hoplobatrachus occipitalis* (Middle) photographed on River Nile banks

Anchieta's Rocket Frog, *Ptychadena anchieta* Photographed on 16/08/2017 Buliisa-Bugana Road

Mascarene Rocket Frog *Ptychadena mascareniensis*

Angolan River Frog, *Amietia angolensis*



Dorsal view of the African Clawed Frog, *Xenopus victorianus* found dead on the road

Ventral view of the African Clawed Frog *Xenopus victorianu* found dead near road pool

Plate 1 showing pictures of some of the amphibian species encountered in the study areas

8.1.2 Reptiles

8.1.2.1.1 Buliisa-Bugana Road

Seven (7) reptile species were recorded in the areas surveyed along the proposed road. The species included one chameleon, one Lizard species, one skink, three geckos and one terrapin species. The commonest species was the Red-Headed Rock Agama, *Agama agama* and the speckle-lipped skink *Mabuya maculilabris*. The only terrapin recorded was encountered in a pool of water that collected in the drainage channel from the road. The species Helmeted terrapin *Pelomedusa subrufa* utilizes water source to survive, whether temporary or permanent. One individual was recorded in the pond in the middle of one of the roads. A full list of reptile species recorded during the survey is shown in table 12 below. None of the species recorded is listed under IUCN Red List of threatened species. The species have been listed as being of Least Concern. However, assessment for the helmeted terrapin was done in 1996 and needs updating.

Table 12 showing the diversity of reptiles recorded along Buliisa Bugana road

Family Name	Scientific Name	Common Name	IUCN Conservation Status	National Red List Conservation Status

Chamaeleonidae	*Chamaeleo ellioti*	Montane Side-striped Chameleon	LC	
Agamidae	*Agama agama*	Red-Headed Rock Agama	LC	
Scincidae	*Trachylepis maculilabris*	Speckled-lipped Skink	LC	
Gekkonidae	*Lygodactylus gutturalis*	Forest Dwarf Gecko	LC	
Gekkonidae	*Hemidactylus mabouia*	Tropical House Gecko	LC	
Gekkonidae	*Cnemaspis quattuorseriatus*	Four-lined Forest Gecko	LC	
Testunidae	*Pelomedusa subrufa*	Helmeted Terrapin	LC	

LC – Least Concern

8.1.2.1.2 Ngwedo-Bikorongo-Ndandamire Road

Seven reptile species were recorded in the areas surveyed along the Ngwedo-Bikongoro-Ndandamire road. The species included one snake species, one Lizard species, one skink, two geckos and one testunidae species. The commonest species was the Red-Headed Rock Agama, *Agama agama*. The community reported the occurrence of the Forest Cobra *Naja melanoleuca,* and Nile Monitor *Varanus niloticus*. A full list of species recorded during the survey is shown below in table 13. None of the species recorded is listed under IUCN Red List of threatened species as of conservation concern. The species are of least concern. The Wildlife Law created in 1963 however gives protection to the Nile Monitor *Varanus niloticus*. The Nile Monitor, *Varanus niloticus* is also listed under the Endangered Species Decree of 1985, which means that international trade of the species is prohibited. The species is listed under CITES Appendix II. Assessment for the helmeted terrapin was last done in 1996 and needs updating.

Table 13 showing the diversity of reptiles recorded along the road

Family Name	Scientific Name	Common Name	IUCN Conservation Status	National Red List Conservation Status
Elapidae	*Naja melanoleuca*	Forest Cobra	LC	
Agamidae	*Agama agama*	Red-Headed Rock Agama	LC	
Scincidae	*Trachylepis maculilabris*	Speckled-lipped Skink	LC	
Gekkonidae	*Hemidactylus mabouia*	Tropical House Gecko	LC	
Gekkonidae	*Cnemaspis quattuorseriatus*	Four-lined Forest Gecko	LC	
Varanidae	*Varanus niloticus*	Nile Monitor	CITES Appendix II	
Testunidae	*Pelomedusa subrufa*	Helmeted Terrapin	LC	

LC – Least Concern, CITES Appendix II – International trade is prohibited for this species

8.1.2.1.3 Kisiabi-Kabolwa Road

During the field survey, six reptile species were recorded in the areas surveyed along the proposed road. The species included two snake species, Two Lizard species, one skink, and one gecko. The occurrence of the Forest Cobra *Naja melanoleuca,* Nile Monitor *Varanus niloticus*, and Central Africa Rock Python *Python sebae* was reported by the community. A full list of species recorded during the survey is shown below in table 14. None of the species recorded is listed under IUCN Red List of threatened species. The Wildlife Law created in 1963 gives protection to the African Rock Python *Python sebae* and the Nile Monitor *Varanus niloticus*. The Nile Monitor *Varanus niloticus* is also listed under the Endangered Species Decree of 1985, which means that international trade of the species is prohibited. The species is listed under CITES Appendix II.

Table 14 showing diversity of reptiles recorded along Kisiabi-Kabolwa road

Family Name	Scientific Name	Common Name	IUCN Conservation Status	National Red List Conservation Status
Elapidae	*Naja melanoleuca*	Forest Cobra	LC	
Agamidae	*Agama agama*	Red-Headed Rock Agama	LC	
Scincidae	*Trachylepis maculilabris*	Speckled-lipped Skink	LC	
Gekkonidae	*Hemidactylus mabouia*	Tropical House Gecko	LC	
Varanidae	*Varanus niloticus*	Nile Monitor	CITES Appendix II	
Pythonidae	*Python sebae*	Africa Rock Python	LC	

LC – Least Concern, CITES Appendix II – International trade is prohibited for this species

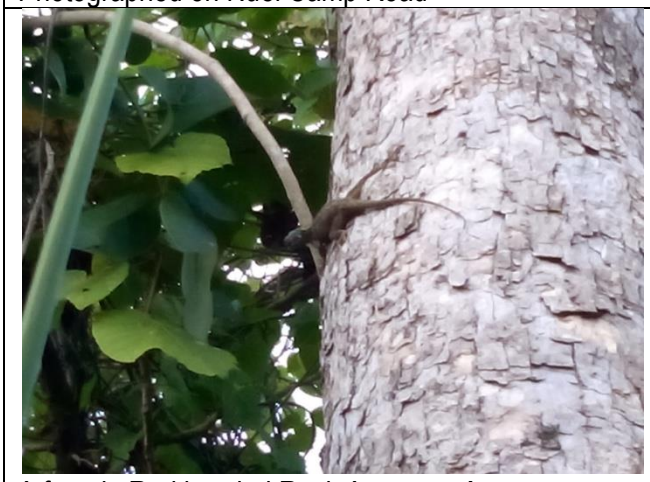
8.1.2.2.8 Pictures of Some of the Reptiles Encountered

Plate 2 below shows some of the reptile species that were encountered during the herpetofauna survey.

Plate 2 showing pictures of some of the reptile species encountered in the study areas

Montane Side-striped Chameleon, *Chamaeleo ellioti* Photographed on Nuel Camp Road

Chameloen found killed on the road near the Tullow Oil Cam within the environs of the Buliisa-Bugana road



A female Red headed Rock Agama – *Agama agama*

Speckle-Lipped Skink Mabuya maculilabris

Forest Dwarf Gecko, *Lygodactylus gutturalis* found killed on Buliisa Bugana Road by Vehicles / Motor Cycles.

Tropical House Gecko, *Hemidactylus mabouia* Photographed on one of the Houses a long ? Nuel Road

Spotted Blind snake, *Typhlops punctatus*

Helmeted Terrapin, *Pelomedusa subrufa*

Plate 2 showing pictures of some of the reptile species encountered in the study areas

8.2 Spatial occurrence / Distribution of herpetofauna

The Mascarene Rocket Frog *Ptychadena mascareniensis* has the ability to resist temporary and the regular drying up of their habitats (Loveridge, 1976 & Dudley, 1978). During the field survey, Individuals were encountered in forest, grassland, tree plantations around water pools collected at roadside, as well as in wetlands. Individuals were found near water source or far away from a water source. The above species and other members of the genera *Ptychadena* have the ability to adapt and can utilize any water source for breeding be it temporary. The genus *Sclerophyrs* also has the ability to utilize temporary water pools for breeding and can therefore occur some distance away from permanent water source. Members of genera *Hoplobatrachus*, *Amietia, Afrixalus, Hyperolius,* and some members of *Phrynobatrachus*, are associated with permanent water sources. Members of these genera are encountered near permanent water sources. Members of genus Afrixalus and genus Hyperolius are found hanging over vegetation in and around permanent water sources. The Natal Puddle Frog *Phrynobatrachus natalensis* and Dwarf Puddle Frog *Phrynobatrachus mababiensis* also prefer wet substrate around permanent water sources to avoid desiccation. These species were encountered and are distributed in and around permanent water sources including pools, ponds, rivers, streams and channels.

Reptiles utilize the sun's energy to raise their body temperatures in order to be more active. Therefore, the best sampling time for reptiles are the early hours of the day when they come out of hiding to bask and also in the evening when they are about to retire for the day. The reptiles' basic requirements are a hiding place and a substrate on which to bask. These places and substrates are abundant in the project area, found in tree plantations, in woodlands, forests, around river bridges, in wetlands, in rocky out crops and settlements, be it home, school, church or local government administrative unit. The reptile species encountered during field survey are adaptive and can live in any habitat as long as there are substrates they can hide and bask. Individuals were recorded around buildings in settlement areas, Trading centers, tree plantations, and around river bridges. The Monitor lizards were recorded in wetlands seasonal or permanent.

8.3 Species of Conservation Concern

Like in many other developing countries of the world, herpetofuana of Uganda are less known compared to birds and mammals. A lot of information is still unknown on the herpetofauna of Uganda including their conservation status. More work still awaits to be done as far as species inventory, population estimates, distribution and conservation status is concerned. From the results of the field survey, most herpetofauna species encountered are common species that are widely distributed in Uganda and some on the African continent. All are of Least Concern according to the IUCN Red List of Threatened species. The Wildlife Law created in 1963 however gives protection to the African Rock Python *Python sebae*, Nile Crocodile *Crocodylus niloticus*, and the Nile Monitor *Varanus niloticus*. The Nile Monitor *Varanus niloticus* is also listed under the Endangered Species Decree of 1985, which means that international trade of the species is prohibited. The species is listed under CITES Appendix II.

The National Red List for Uganda indicates some of the encountered species as data deficient (DD). This means a lot of research needs to be done to enable assessment of the different species.

Amphibians and reptiles are elusive creatures some of which require a lot of time to find. Time was a limiting factor during the field survey. More time was therefore needed for an exhaustive inventory especially in the woodland and Forest ecosystems. Secondly, the field survey was conducted when the dry spell was still on and this limits the activity of some herpetofauna species, as they hide to avoid desiccation.

9.0 Identification and Evaluation of Potential Impacts of the Project on Herpetofauna

Human intervention in the natural environment has been shown to affect amphibian fauna in two ways: adversely, by destroying natural habitat, and favorably, by creating new habitats (Khan, 1990). The few research so far done has revealed that road impacts on herpetofauna are complex and occur at all levels (taxon, species, and individual). The potential for roads to act as barriers, or filters, to amphibian and reptile movement therefore requires further research.

9.1 Potential Impacts

The following are potential impacts that have been identified

Impact	Impact in relation to proposed project	Nature of Impact
Habitat Loss	Construction Phase Clearing of vegetation in the development footprint will lead to a loss of habitat for flora and fauna and a likely reduction in on-site biodiversity	Indirect & Negative
Killing or injuring of fauna	During the construction phase Herpetofauna may be killed or injured as a result of earth works, vehicle activity and poaching	Direct & Negative
Contamination as a result of petroleum and other oil products	During construction and operational phase Spills of petroleum products into water has been shown to inhibit tadpole growth and prevent metamorphosis	Indirect & Negative
Changes in Hydrological factors	During construction and operational phases. Changes in hydrological factors e.g flow velocity, depth, and frequency of flooding that come as a result of diverted road discharge influences embryonic survival and breeding success e.g wetlands experiencing water level fluctuations of greater than 20 cm and flow velocities greater than 5.0 cm/sec had lower amphibian richness. Changes in water quality may adversely affect amphibian populations by way of affecting their breeding grounds	Indirect & Negative
Sediment loading in streams from roads	Construction phase Reduces amphibian densities or populations of their invertebrate prey in streams experiencing sediment loading from roads	Indirect & Negative
Establishments of borrow pits and culvert installation	Construction and Operational phase Borrows and culverts may benefit amphibians and reptiles	Indirect & Positive
Stone works for the drainage channels and culverts	Construction and Operational phase. Stone works will provide basking ground for reptiles	Indirect & Positive
Maintenance activities associated with	Operational Maintenance activities like mowing may impact amphibian and reptile populations through direct	Direct & Indirectly. Negative

roads and surrounding edges	mortality but also reduces cover availability, soil moisture, prey densities, and often renders the habitat unsuitable for certain species	
Exposure to Vehicle noise	Construction and Operational Exposure to vehicle noise may result in physiological and behavioral hearing loss and misinterpretation of environmental acoustical signals. Noise may result in modification of male calling behavior, & impairs the ability of females to discriminate among call types and to discern location of calling males during breeding	Indirect & negative
Exposure to artificial light	Construction and operational phase Exposure to artificial light may result in suspension of normal foraging and reproductive behavior. Olfaction plays a primary role in amphibian migration and orientation. Environmental cues may be obscured by emissions or runoff from vehicles	Indirect & Negative
Hindrance of movement	Construction and Operational Hindrance of amphibian and reptile movement as a result of natural habitats alteration in size, shape and spatial arrangement of habitats. The hindrance will affect dispersal patterns & hinders amphibian movement in response to forest edges, roads, and streambeds	Indirect & Negative
Behavioral Road Avoidance	Construction and Operational Behavioral road avoidance by amphibians and reptiles impacts populations through restriction of movement patterns.	Indirect & Negative

9.2 Impact Rating

The environmental significance of each impact were assessed for the construction, operation and decommissioning phases. The results of the assessment are detailed in Table below.

Impact	Occurrence			Severity				Environmental Consequence Before Mitigation	Environmental Consequence After Mitigation
	Direction	Probability	Duration	Magnitude	Geographical Extent	Reversability	Frequency		
Habitat loss as a result of vegetation clearing	Negative	Definite	Permanent	Moderate	Local	Irreversible	Low	High	High
Killing or injuring of fauna	Negative	Medium Probability	Short-Term	Low	Local	Irreversible	Low	Moderate	Low
Contamination as a result of petroleum and other oil products	Negative	Low probability	Short-Term	Low	Local	Reversable	Medium	Low	No impact
Changes in Hydrological factors	Negative	Low probability	Permanent	Low	Local	Irreversible	Medium	Low	Low
Sediment loading in streams from roads	Negative	Low probability	Short-Term	Moderate	Local	Reversible	Medium	Low	Low
Establishments of borrow pits and culvert installation	Positive	Highly probable	Permanent	Moderate	Local	Irreversible	Low	Low	Low

Stone works for the drainage channels and culverts	Positive	Highly probable	Permanent	Moderate	Local	Irreversible	Low	Low	Low
Maintenance activities associated with roads and surrounding edges	Negative	Low probability	Permanent	Moderate	Local	Reversible	Medium	Low	Low
Exposure to Vehicle noise	Negative	Low probability	Permanent	Low	Local	Irreversible	Low	Low	Low
Exposure to artificial light	Negative	Low probability	Permanent	Low	Local	Irreversible	Low	Low	Low
Hindrance of movement	Negative	Low probability	Permanent	Low	Local	Irreversible	Low	Low	Low
Behavioral Road Avoidance	Negative	Low probability	Permanent	Low	Local	Irreversible	Low	Low	Low

9.3 Overall Impact Assessment

The roads that have been proposed for upgrading are in existence. It's not that roads are going to be opened anew. The behavioral and ecological impacts or stress on the herpetofauna have been happening. Secondly, the volume of vehicles is not much by way of exposing vehicle noise to herpetofauna to the extent of negatively interfering with their behavior and ecology. Also, even if the vehicular volume increases few travel at night to impact herpetfauna negatively by way of exposing artificial light. Most of the species recorded are of least concern and are widely distributed at the local level in the areas they were recorded and nationally in other parts of Uganda. The roads are already in existence and the extent of space that will be affected by the construction to measure up to the 10 metres road corridor will be small. Impacts on herpetofauna species and population will therefore be low. The overall negative impacts of the project will therefore be minimal. On that basis, the proposed project will have minimal or no impact at all on the amphibians and reptilian species and populations in the project area.

10. Mitigation Measures

The following mitigation measures are proposed

Impact	Mitigation Measure
Killing or injuring of fauna	Amphibians and reptiles are shy groups of animals always eager to escape if given chance. To minimize death, attempts to scare away the herpetofauna before undertaking vegetation clearance and soil filling or dumping in wetlands should be done
Habitat loss as a result of vegetation clearing	From humanitarian point of view, every effort should be made to save and relocate any amphibian and reptiles encountered during the construction phase that cannot flee on its own accord. The herptiles should be relocated to a suitable habitat/area immediately outside the construction footprint area but under no circumstance to an area further away.
Contamination as a result of petroleum and other oil products	Avoid intentional spilling of petroleum products in wetlands. Implementation of the water act and wetlands policy specifically articles that prohibits pollution and dumping of waste.
Changes in Hydrological factors and Sediment loading in streams from roads	During construction avoid activities that would lead to sedimentation and changes in hydrological landscape.
Mortality Associated with Road Maintenance activities for roads and surrounding edges	To minimize death, attempts to scare away the herpetofauna before undertaking vegetation clearance and soil filling or dumping in wetlands should be done
Exposure to Vehicle noise and exposure to artificial light	
Hindrance of movement and Behavioral Road Avoidance	Provide for road crossing structures. **Amphibian and Reptile Tunnels** - Passages designed specifically to facilitate seasonal migrations to and from breeding and/or nesting sites, and movements between upland and wetland habitats. These tunnels have various dimensions and designs.

	Drainage Culverts - Culverts originally engineered for water passage and drainage modified to encourage wildlife passage. For example, shelves or floating docks may be installed, or water may be channeled through a trench within the culvert.

11. Monitoring activities

The survey was conducted during dry spell and time wasn't enough for observation of amphibian movements and use of the habitats. There is need to monitor:

1) Amphibian movements between their hiding habitats and their breeding sites.
2) Use of habitats by herpetofauna

This will help understand whether movement of herpetofauna from one side of the road to the other happens. Particular areas to monitor in this respect include the following:

12. Conclusion and Recommendation

The herpetofauna species encountered during the study are still abundant and widely distributed in Uganda. The population of the species to be affected if at all, by the construction of the roads is very minimal and will not affect the survival of the species recorded. Since the roads are in existance, the additional stress that will be caused by the road upgrade and operational on the herpetofauna will be negligible. The upgrade of the proposed roads would therefore have minimal or no negative impact on the herpetofauna in the project area. However, it is recommended that precautionary measures especially during the construction phase be undertaken to avoid impacting herpetofauna negatively.

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Annex I: Amphibians that potentially occur in the project area according to the reviewed literature

Family Name	Scientific Name	Common Name	IUCN Red List Conservation Status	National Red List Conservation Status
Hyperoliidae	Hyperolius lateralis	Side-blotched Reed Frog	LC	
Ranidae	Amnirana galamensis	Galam White-lipped Frog	LC	
Ranidae	Amnirana albolabris	Forest White-lipped Frog	LC	
Hemisotidae	Hemisus marmoratus	Marbled Snout-burrower	LC	
Bufonidae	Bufo gutturalis	Guttural Toad	LC	
Bufonidae	Bufo kisoloensis	Kisolo Toad	LC	
Bufonidae	Bufo maculatus	Flat-backed Toad	LC	
Arthroleptidae	Arthroletis stenodactylus	Common Squeaker	LC	
Ranidae	Hildebrandtia ornate	Ornate Frog	LC	
Ranidae	Pyxicephalus edulis	Dwarf Bullfrog	LC	
Ranidae	Ptychadena oxyrhynchus	Sharp-nosed Ridged Frog	LC	
Ranidae	Ptychadena christyi		DD	VU B2ab (ii, iii)
Ranidae	Ptychadena chrysogaster		LC	VU B2ab (ii, iii)
Ranidae	Phrynobatrachus auritus	Golden Puddle Frog	LC	EN B1+2ab (iii)

Annex II: Reptile species that Potentially Occur in the Project Area as indicated by Literature

Family Name	Scientific Name	Common Name	IUCN Red List Conservation status	National Red List Conservation Status
Testunidae	Kinixys belliana	Bell's Hinged Tortoise	LC	
Testunidae	Pelomedusa subrufa	Helmeted Terrapin	LC	
Testunidae	Trionyx triunguis	Nile Soft-shelled Turtle	LC	
Gekkonidae	Hemidactylus brooki	Brook's Gecko	LC	
Scincidae	Lygosoma afrum	Peters' Writhing Skink	LC	
Scincidae	Lygosoma sundevalli	Sundevall's Writhing Skink	LC	
Cordylidae	Chamaesaura anguina	Highland Grass Lizard	LC	
Gerrhosauridae	Gerrhosaurus major	Great Plated Lizard	LC	
Chamaeleonidae	Chamaeleo bitaeniatus	Side-striped Chameleon	LC	
Chamaeleonidae	Chamaeleo ellioti	Montane Side-striped Chameleon	LC	
Chamaeleonidae	Chamaeleo laevigatus	Smooth Chameleon	LC	
Chamaeleonidae	Rhampholeon boulengeri	Boulenger's Pygmy Chameleon	LC	
Varanidae	Varanus niloticus	Nile Monitor	LC	
Typhlopidae	Typhlops punctatus	Spotted Blind Snake	LC	
Typhlopidae	Typhlops angolensis	Angola Blind Snake	LC	
Typhlopidae	Typhlops lineolatus	Lineolate Blind Snake	LC	
Leptotyphlopidae	Leptotyphlops scutifrons	Peters' Worm Snake	LC	
Pythonidae	Python sebae	Central Africa Rock Python	LC	
Colubridae	Lamprophis fuliginosus	Brown House Snake	NE	DD
Colubridae	Lamprophis olivaceus	Olive House Snake	LC	
Colubridae	Lycophidion capense	Cape Wolf Snake	LC	
Colubridae	Lycophidion ornatum	Forest Wolf Snake	LC	
Colubridae	Mehelya capensis	Cape File Snake	LC	
Colubriade	Philothamnus angolensis	Angolan Green Snake	LC	
Colubridae	Philothamnus carianatus	Thirteen-scaled Green Snake	LC	
Colubridae	Thrasops jacksoni	Jackson's Tree Snake	LC	
Colubridae	Crotaphopeltis hotamboeia	White-lipped Snake	LC	
Colubridae	Dispholidus typus	Boomslang	LC	
Colubridae	Psammophis mossambicus	Olive Sand Snake / Hissing Sand Snake	LC	
Colubridae	Dasypeltis scabra	Common Egg-eater	LC	
Atractaspididae	Atractaspis irregularis	Variable burrowing Asp	LC	
Elapidae	Naja nigricollis	Black-necked Spitting Cobra	LC	
Viperidae	Bitis arietans	Puff Adder	LC	

APPENDIX 5.3: MAMMAL ASSESSMENT

BASELINE MAMMAL ASSESSMENT FOR THE PROPOSED GRAVEL ROADS UPGRADE SUB-PROJECTS IN BULIISA DISTRICT UNDER THE ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT, MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Mammal Specialist Report

***Paul Okiror**
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August, 2017

Introduction

The diversity of mammals usually reflects the health status of a habitat. Besides, some mammals such as the elephants, hippos, giraffes, antelopes and Rhinos are important in the tourism industry. Considering the potential habitat losses and destabilization of the food chains and corridors during civil works, it was important to undertake a baseline assessment of the mammals as part of the environmental and social impact assessment.

Mammal assessment methods

Multiple methods were used to identify and record the distribution and abundance of mammals. Review of documents on biodiversity in the region was undertaken to give general insight into distribution of mammals in the sub region and hence an appreciation of expected species. Other methods include;

- Observation
- Identification through foot prints and dung
- Study of animal trails and presence of soil mounds
- Interviews with local residents
- Due to time and financial constraints, the study team did not lay traps but relied footprints, dung and the on the information from the Uganda Wildlife Authority (UWA), National Forestry Authority (NFA), Local Leaders and Community members to document the mammals withi the study area.

Findings

Eighteen (18) species of mammals were enlisted during the interactions and field observations in Buliisa District. The 18 species belonged to 11 families. The most represented families were Bovidae (27.8%, N=18) and Felidae (11.1%). The *Hippopotamus mphibius* and *Loxodonta africana* are vulnerable while *Pan troglodytes* is an endangered species. The roads assessed were Buliisa-Bugana, Ngwedo-Bikorongo-Ndandamire and Kisiabi-Kabolwa between 14-18th August 2017. Futher interactions were held with community members, Local Leaders and technical staff at Buliisa District Local Government, UWA and the NFA.

Management of Species of Conservation Concern

During stakeholder consultations, the UWA staff clarified that the proposed roads are far away from the protected areas and the thus the likelihood of negatively affecting the vulnerable and endangered species (*Hippopotamus mphibius* and *Loxodonta africana* and *Pan troglodytes*) is minimal. Buliisa District Local Government and MLHUD have included UWA in monitoring of the implementation of the Environmental and Social Management Plan (ESMP). In addition, the Supervision Consultant and Contractor shall recruit and deploy competent Environmental and Social staff to monitor and report any occurrences of wildlife during construction activities alonf the proposed roads.

Fauna potentially found in Buliisa District*

S/No.	Local name (Lugungu)	Common name	Scientific name	Location	Family	IUCN Status
1	Ngugu	Hipopotamus	*Hippopotamus mphibius*	Albert Nile	Hippopotamidae	VU
2	Mpeta	African Bufallo	*Syncerus caffer*	MFNP	Bovinae	LC
3	Ntiyo	Crocodile	*Crocodylus niloticus*	Albert Nile	Crocodylidae	LC
4	Gule	Baboon	*Papio anubis*	MFNP	Cercopithecidae	LC
5	Nzengu	Elephant	*Loxodonta africana*	MFNP	Elephantidae	VU
6	Kipeera	Chimpanzee	*Pan troglodytes*	MFNP	Hominidae	EN
7	Munsi/Kamuje	African ground squirrel	*Atlantoxerus getulus*	On-farm, fallows, MFNP	Sciuridae	LC
8	Kakala	Wild cat	*Felis silvestris*	MFNP, fallows	Felidae	LC
9	Mparaki	Uganda Kob	*Kobus kob thomasi*	MFNP	Bovidae	NE

10	Mpono gya mwirungu	Wild pig	***Sus scrofa***	MFNP, Fallows	Suidae	LC
11	Ntama	Sheep	*Ovis aries*	Domestic	Bovidae	NE
12	Kajango	Cat	*Felis catus*	Domestic	Felidae	NE
13	Mbwene	Dog	*Canis lupus familiaris*	Domestic	Canidae	NE
14	Mbuli	Domestic goat	*Capra aegagrus hircus*	Domestic	Bovidae	NE
15	Nte	Cow	*Bos taurus*	Domestic	Bovidae	NE
16	Ngeye	Black-and-White Colobus monkey	*Simia polycomos*	MFNP, fallows		NE
17	Mpono	Domestic pig	*Sus scrofa domesticus*	Domestic	Suidae	NE
18	Mese	Rat	*Rattus rattus*	Domestic, fallows, MFNP	Muridae	LC

*The list of mammals and their common habitats was obtained from mainly interviews with Community members, Local Leaders, NFA and UWA staff and and some field observations. MFNP=Murchison Falls National Park; EN=Endangered; LC=Least Concern; NE=Not Evaluated; VU=Vulnerable.

APPENDIX 5.4: FISH INVENTORY

BASELINE FISH DIVERSITY ASSESSMENT ON RIVERS AND STREAMS IN BULISA DISTRICT UNDER THE ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT, MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT.

Albertine Region Sustainable Development Project (ARSDP)

By

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1.0 Background

Fish fauna, like invertebrate communities can also be used as indicators of aquatic ecosystem habitat quality. Fish are an important component of aquatic ecosystems and through their role as consumers of other organisms; they have a significant influence on the aquatic ecosystem structure and function. Fish therefore play active roles in the maintenance of ecosystems and in the provision of a range of ecosystems services (Holmlund & Hammer, 1999). Monitoring of fish communities can provide a useful indicator of the ecological health of their habitats.

Fish are sensitive to changes in water quality and habitat structure caused both by natural and anthropogenic activities/ causes. Common anthropogenic effects on fish can result from many factors including; contamination by wastewater, metal pollution, pesticides, salinity and organic wastes and nutrients causing either direct effects on fish health or indirect effects on the oxygen climate in the environment through eutrophication; and physical habitat changes such as thermal pollution, changes in stream flow regimes, wetland resources harvesting and land clearance by humans for their benefit. Besides the intrinsic biodiversity and the human food values of most species, fish can be useful indicators of the impact of many different anthropogenic activities on the environmental health of aquatic ecosystems (Pigeon, 2004). In tropical rivers and streams such as the ones surveyed/studied in Buliisa district, there are certain fish species like the small barbs (*Barbus sp.*) and haplochromine species which have higher aesthetic values especially in the aquarium industry as ornamental fishes.

It was appropriate to include fish as a taxon in this baseline biodiversity assessment of Buliisa and Hoima districts under the Albertine Region Sustainable Development Project because it improves our understanding of the fish fauna in the lakes, rivers and streams affected by the proposed road projects without deploying complex gears and approaches.

Considering that the exploration for oil and gas in the Albertine Graben of Uganda has the potential to have serious negative consequences on the rich biodiversity of the region, the Ministry of Lands, Housing and Urban Development under the Albertine Region Sustainable Development Project (ARSDP), being aware of the potential impacts has during August 2017, deployed their expert teams to undertake various studies on the biodiversity and identify threatened species and habitats in the Buliisa and Hoima district areas including lake shorelines and associated rivers, streams and wetlands in order to assess the current status and provide baseline information on the critical habitats as required by the World Bank Operational Policy on Natural Habitats (OP 4.04) and the International Finance Corporation Performance Standard 6 (IFC-PS6) - *Biodiversity Conservation and Sustainable Management of Living Natural Resources*.

1.1. Objectives

The Albertine Region Sustainable Development Project (ARSDP), aims at establishing a reliable biodiversity baseline for the Albertine Graben that will enable informed decision making on any upcoming roads and economic infrastructure developments, including:

a) Understanding the status of habitats and species within the Graben, their risk of extinction and potential for conservation (including vulnerability and resilience) and producing a peer reviewed IUCN Red List for Uganda;

b) Mapping the location of critical habitats and species and understanding the nature and level of change to the present date, and ensuring that this is carried out in a manner allowing efficient updating in order to track future changes;

c) Understanding the potential for biodiversity offsets in the Albertine Graben in view of the various proposed and on-going developments, their likelihood of success and the most effective methods of delivery.

The major objective of the fish study therefore was to provide input into the above ARSDP's effort by assessing the fish species diversity including: reviewing the current status and the extent of biodiversity knowledge in the fish faunal taxa for the Albertine Graben (Buliisa and Hoima districts) and identifying species which will constitute critical habitat species.

2.0 Methodology

2.1. Study area

Nine sites in Buliisa district **(Table 1)** were sampled for fish and water specimens along the selected roads for upgrading and their coordinates noted. It was found that some other low land areas which seem to hold water during heavy rains were still dry at the time of sampling.

Table 1. Description of the fish sampled sites along the various roads.

*(**Note:** Coordinates for sampled areas were recorded in UTM format).*

No	Road	Distance (Km)	Stream/ Flood plain/ Waterpool/ Valley dam	Description	Northing Easting
1	Buliisa-Bugana	10.8	Kijangi 1	This water pool was found on the east side of the road. This is a seasonal water pool which only fills during the rainy season to about 0.3 meters deep but dries up during the dry season. The dominant vegetation within the flood plain were; water lilies, and other terrestrial shrubs.	329102, 232709
			Kijangi 2	Similar description as Kijangi 1,	329059, 232388
			Kijangi 3		329380, 231680
			Kijangi- Kachoke		330320, 231243
			Kichoke		330455, 231012
2	Kisomera-Kalyango Nuel camp	3.45	Kalyango		333490, 246356
			Murchison Nile (Lower Victoria Nile) Matyasi		248630
3	Ngwedo-Ndandamire-Bikongoro	10.7	Kibambara valley dam		329211, 237402
4	Kisiabi-Kabolwa	9.8	Kabolwa		323273, 222830

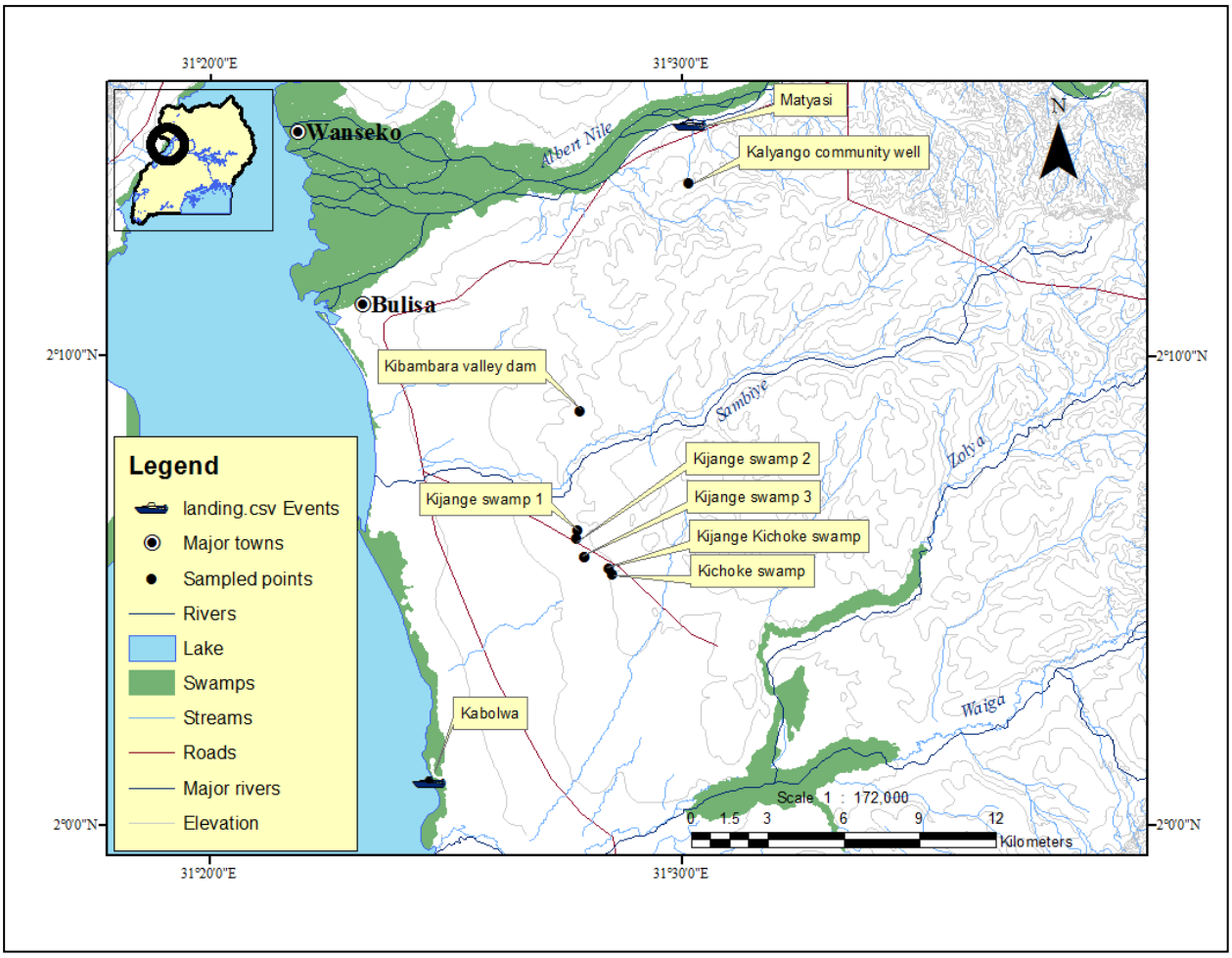

Figure 1: Location map for sampled lakes, swamps and valley dams in Buliisa district

2.2. Materials and Methods

Fish populations were sampled at each of the above named 9 study sites by experimental fishing using a 220V (10A) electro-fisher machine operated with a Honda GX 240 8 HP generator at all the sites. Each experimental sampling station was sampled for at least 30 minutes on each day the site was visited. The electro-fisher was used in all rivers, streams and dam sites along the roads.

Fish specimens were identified to species level as in Greenwood (1966). Specimens of fishes not easily identifiable in the field especially the haplochromine species were preserved for laboratory morph-metric examination and eventual identification, Bagenal et al., (1978). For each species, the number, total weight (g) and individual lengths (cm) of the fish were recorded. Fork length (FL) was measured for all fish species with forked caudal fins instead of Total Length (TL), which was used for fishes with entire caudal fins.

The conservation status of the recovered fish species were evaluated according to the guidelines for using the IUCN Red List Categories and Criteria as outlined by the IUCN Standards and Petitions Working Group 2008 and as detailed in Carrizo et al., (2013), IUCN/SSC. (2008), as well as the IUCN Red List Categories and Criteria: Version 3.1. Second edition, IUCN, (2012) – i.e. EX for Extinct, EW - Extinct in the wild, CR for

Critically endangered, EN – Endangered, VU - Vulnerable, NT - Near Threatened, LC for Least Concern, DD for Data Deficient and NE - for Not Evaluated.

3.0 Results

3.1 Fish species composition, relative abundance and distribution

A total of 540 individual fish and 26 fish species belonging to 11 families (Table 2) were recorded from eight out of the nine sampled sites and two haplochromine species (*Thoracochromis wingattii* and *Thoracochromis loati*) were found endemic to the Lake Albert. Kibambara valley dam was sampled but there were no inhabitant fish recorded which could be because it had newly been constructed and colonisation of the dam by fish had not started. Family Cyprinidae registered the highest number of species (10), followed by Cichlidae (five) and then Mochocidae (three). Two species - *Clarias gariepinus* (Clariidae) and *Oreochromis niloticus* (Cichlidae) were recorded from at least eight (7) sites out of the eight sampled with fish in the study area. Kijangi 1 recorded the highest number (15) of fish species followed by Kabolwa flood plains (10) while Kijangi-Kichoke site followed as number three with nine (9) species recorded (Table 2).

Brycinus nurse caught by fishermen from one of the rivers in the study area. It is a delicacy to many people near these water bodies where they deep fry and eat it in that form.

Brycinus nurse caught by fishermen from one of the rivers in the study area. It is a delicacy to many people near these water bodies where they deep fry and eat it in that form.

In terms of individual numbers over all, Kabolwa flood plains registered the highest number (137) followed by Kijangi 1 which registered 126, then Matyasi (71) and Kijangi-Kichoke site was the fourth with 61 individuals (Table 2). The small pelagic fish species (all Cyprinidae) that mature at very small sizes i.e. < 15 cm total/fork length namely *Barilius niloticus* (118, 21.9%), and *Barbus perince* (76, 14.1%) respectively, were the most dominant in terms of individual numbers over all, regardless of experimental sites in the study area whereas the large sized species were dominated by *Polypterus senegalus* (56, 10.4%) and *Clarias gariepinus* (50, 9.3%) respectively.

Table 2. Number of fish as an index of relative abundance of species recovered and percentage contribution per study site

Family	Fish species	IUCN	Kisomera - Kalyango	Matyasi	Kabolwa	Kijangi 1	Kijangi 2	Kijangi 3	Kijangi - Kichoke	Kichoke	Grand Total	Overall %ge contribution per species
Cichlidae	Oreochromis niloticus	LC	1	17	2	9	1	2	2		**34**	**6.3**
	Oreochromis leucostictus	LC				4	1				**5**	**0.9**
	Tilapia zillii	LC		2	2	1					**5**	**0.9**
	Thoracochromis wingatii	LC			9						**9**	**1.7**
	Haplochromine sp (unidentified)	LC				2					**2**	**0.4**
Clariidae	Clarias gariepinus	LC	4	14	11	12	2	3	4		**50**	**9.3**
Cyprinidae	Barbus prince	LC	15	23	7	21	2		8		**76**	**14.1**
	Barilius niloticus	LC		7	81	30					**118**	**21.9**
	Barbus kerstenii	NE		4							**4**	**0.7**
	Labeo forskahlii	LC		2		21				1	**24**	**4.4**
	Labeo victoriae	LC		2							**2**	**0.4**
	Labeo coubie	LC				11			8		**19**	**3.5**
	Barbus sp. (Tinny)	LC	4								**4**	**0.7**
	Neobola bredoi	LC			7						**7**	**1.3**
	Barbus bynni	LC				3					**3**	**0.6**
	Barbus sp.	LC				1	14	2		43	**60**	**11.1**
Mochocidae	Synodontis afrofischeri	LC	3								**3**	**0.6**
	Synodontis schall	LC	1						29		**30**	**5.6**
	Synodontis frontosus	DD							5		**5**	**0.9**
Polypteridae	Polypterus senegalus	LC	21		12	7	8	8			**56**	**10.4**
Schilbeidae	Schilbe intermedius	LC	5						2		**7**	**1.3**
Alestidae	Brycinus nurse	LC			2						**2**	**0.4**
Centropomidae	Lates niloticus	LC			4	2					**6**	**1.1**
Bagridae	Bagrus bajad	LC				1			2		**3**	**0.6**
Anabantidae	Ctenopoma murei	LC				1	1	3			**5**	**0.9**
Mormyridae	Marcusenius grahami	LC							1		**1**	**0.2**
	Grand Total		**54**	**71**	**137**	**126**	**29**	**18**	**61**	**44**	**540**	**100.0**
	No. of species		**8**	**8**	**10**	**15**	**7**	**5**	**9**	**2**	**26**	

When compared, there was a general direct relationship between the number of species, Shannon-Wiener (H') and Margalef diversity indices (Figure 1). Overall, species diversity was highest at two closely related sites of Kijangi 1 and Kijangi 2 (No. of species=10, H'=1.1, D=26.2) and (No. of species=15, H'=3.1, D=24.7) respectively, and the lowest species diversity according to Shannon-Weiner index (H') was recorded at Kijangi-Kichoke site (No. species=5, H'=0.9, D=5.9). In agreement with the Shannon index, it was observed that, the Margalef index (D) of 5.9 was the lowest, corresponding with what was recorded with Shannon-Wiener Index of 0.9. The other sampled sites registered variable species diversity indices but were not as low as at Kijangi-Kichoke site. It is envisaged that after all laboratory work is complete and they are all identified, the species diversity for this site may increase.

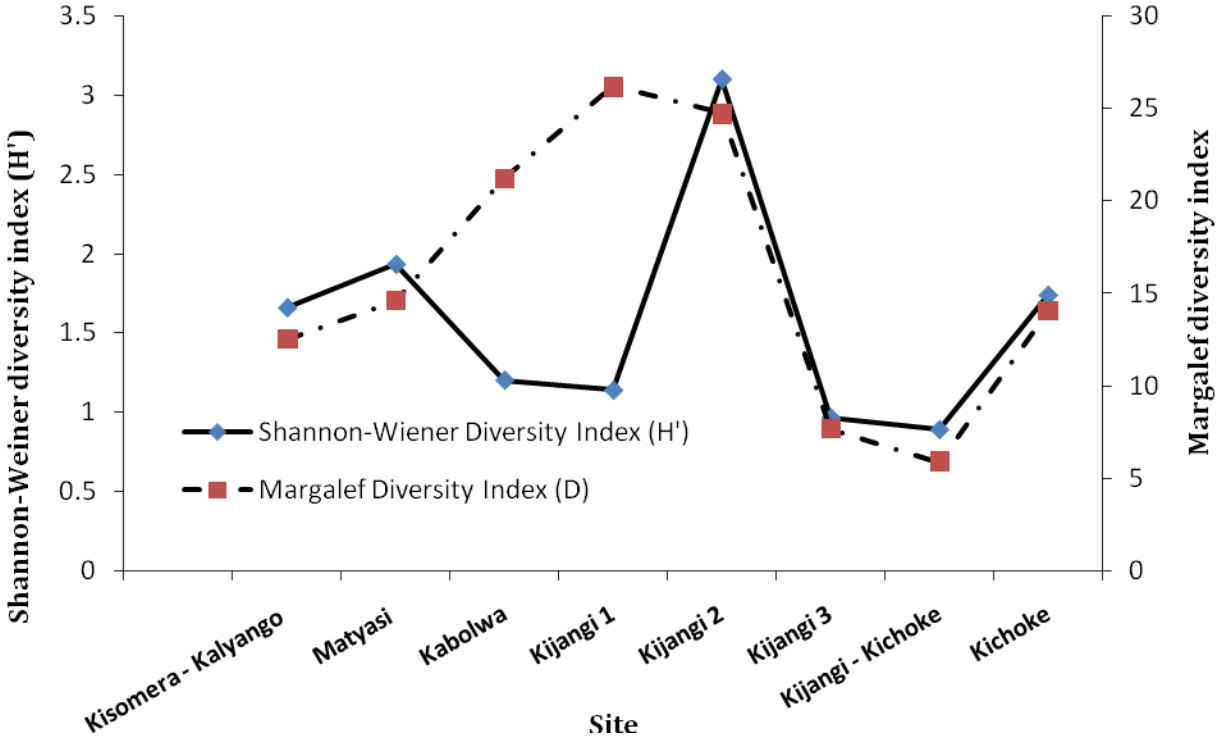

Figure 2. Spatial variation in fish species diversity across the sampled nine sites selected from the various rivers, streams and water pools in Buliisa district, April 2017.

3.3. IUCN conservation status of fish species recovered

Out of the 26 fish species encountered in the study area (Table 3), one species *Synodontis frontosus* of family Mochocidae has been categorised as data deficient (DD) and *Barbus kerstenii* has been categorised as not yet evaluated thus denoted as (NE). A total of 24 species (Table 3) fall in the least concern (LC) category according to the IUCN red list of threatened species; IUCN, (2013).

Table 3. Categorisation of fish species encountered in the different rivers and streams in the study area - (IUCN Red List of threatened species, 2013).

FAMILY	EX	EW	CR	EN	VU	NT	LC	DD	NE	TOTAL
ALESTIDAE	-	-	-	-	-	-	1	-	-	**1**
ANABANTIDAE	-	-	-	-	-	-	1	-	-	**1**
BAGRIDAE	-	-	-	-	-	-	1	-	-	**1**
CENTROPOMIDAE	-	-	-	-	-	-	1	-	-	**1**
CICHLIDAE	-	-	-	-	-	-	5	-	-	**5**
CLARIIDAE	-	-	-	-	-	-	1	-	-	**1**
CYPRINIDAE	-	-	-	-	-	-	9	-	1	**10**
MOCHOCIDAE	-	-	-	-	-	-	2	1	-	**3**
MORMYRIDAE	-	-	-	-	-	-	1	-	-	**1**
POLYPTERIDAE	-	-	-	-	-	-	1	-	-	**1**
SCHILBEIDAE	-	-	-	-	-	-	1	-	-	**1**
TOTAL	**-**	**-**	**-**	**-**	**-**	**-**	**24**	**1**	**1**	**26**

EX = **Extinct**, **EW = Extinct in the wild**, **CR = Critically endangered, EN = Endangered**, **VU = Vulnerable, NT = Near threatened, LC = Least concern**, **DD** = **Data deficient** and **NE = Not evaluated**

4.0 Discussion

4.1. Fish species composition, diversity, biology and ecology

A total of 53 fish species have been recorded from Lake Albert (Greenwood 1966, Greenwood 1981, Worthington 1929; Witte et al., 2009; Wandera & Balirwa 2010) before and; all the fish species encountered at the experimental sites in the current study area are typical of Lake Albert fish fauna with some few such as the *Mormyrus spp*, *Synodontis spp*. and *Schilbe spp* doubling for Lake Victorian fish fauna (Greenwood, 1966, Worthington, 1929) as well. The interaction of these rivers and streams under study is illustrated by the high diversity of the fish species encountered (about 50% of those ever recovered from the main Lake Albert), indicating the significance of these small rivers and streams in fish species conservation.

4.2. Fish Species Conservation Status

This current study provides a quick indication of the fish communities in the rivers, streams and the seasonal water pools within the study area and though the majority (24) of the fish species encountered fall under the Least Concern (LC) category according to the IUCN red list (Table 3), there is need to assess the data deficient (DD) species (*Synodontis frontosus*) and the *Barbus kerstenii* which has not been evaluated (NE) to establish their conservation status for development of their conservation plans. Special conservation strategies are particularly important for species like *T. Wingatii* which is endemic to the Albertine system for its longer existence because if such endemic species become rare, it implies that their conservation status has to be re-evaluated. Much as most species have been evaluated as Least Concern (LC), avoidance strategies need to be put in place to protect and conserve them in order to keep them in big numbers which have less concern because they are available in these habitats, hence the oil exploration and production activities, and other planed developments should not be the cause of concern about these species.

4.3. Anticipated threats to the aquatic environment

Excessive noise from development activities such as road construction activities, oil and gas exploration and production including seismic activities and electricity generation have the potential to affect the health and wellbeing of aquatic animals as well as humans. The presence of these sounds in the aquatic environments therefore, will likely affect aquatic organisms like fish and invertebrates (fish food) (Popper & Hastings, 2009). There is growing scientific evidence that seismic surveys in particular negatively affect aquatic life, causing physical damage, displacement from habitats and disruption to breeding. This evidence suggests that underwater sounds generated by human activities effect several types of responses in fish and numerous aquatic organisms including fish food (Popper, 2003). The potential biological effects of noise on fish include physical/physiological effects, behavioural disruption, and indirect effects associated with altered prey availability and have been found to impact on individual fish, fish populations and fisheries. Harmful effects range from immediate death and internal injury to nearly fatal effects. The physical/physiological effects include hearing threshold shifts and auditory damage as well as non-auditory disruption and can be directly caused by sound exposure or the result of behavioural changes in response to sounds. Noise mainly affect younger life stages of fish such as eggs, larvae and fry (Kenchington, 1999; Kosheleva, 1992; Popper & Hastings 2009a; Wahlberg & Westerberg 2005). These are stages in fish development where the organisms have limited ability to escape from their original areas in the event of various influences. The effects are often classified as immediate mortality (short-term effects), mortality over time (long-term effects) and non-lethal injuries.

Carefully selected strategies aimed at minimizing possible impacts from such activities to the aquatic environment and in particular fish communities, their food and habitat health are of great concern to the sustenance of ecological functioning of these river and stream ecosystems and their surrounding environments. Studies on feeding ecology of most fishes in the Albertine system suggest that macro-invertebrates form a major diet of the predatory fish species including *L. niloticus*, *Alestes baremose* and *Hydrocinus forskahlii*. The abundance and distribution of such organisms in the study area should therefore continue to be incorporated as a research component in future monitoring surveys to evaluate any potential negative impacts that may be caused to these critical organisms by activities related to infrastructural development such as road construction, oil and gas production and electricity generation.

4.4. Major constraints encountered during the survey

There were no major constraints encountered during the survey apart from the scattered rivers and streams within the study area and probably the intermittent mechanical breakdown of the electro-fisher machine which required repair now and again hence caused some delays.

5. 0 Conclusions and recommendations

5.0.1 Conclusions

i) A total of 24 species (94.3%) of 26 fish species encountered in the Buliisa area the fall in the least concern (LC) category according to the International Union for Conservation of Nature and Natural Resources (IUCN) red list of threatened species.
ii) One species *Synodontis frontosus* of family Mochocidae is categorised as data deficient (DD) and *Barbus kerstenii* from the Cyprinidae family is not yet evaluated thus denoted as (NE) by the IUCN.
iii) The data obtained during this survey serves as a baseline on the fish species composition, species diversity, and their relative abundance in the study area. The data to be obtained during future surveys shall be compared to determine their effects on the fishes.

5.0.2 Recommendations

a. The fish species recorded in this assessment are largely of least conservation concern. It implies that the proposed roads can be upgraded. However, measures must be put in place to avoid and mitigate potential negative impacts that may be triggered by air, noise and water pollution during the construction and operation phase of the project.

b. There is an indication of high diversity of fish species in these rivers and streams therefore; aquatic invertebrate studies should be conducted alongside the fish diversity surveys to establish their distribution and abundance because these aquatic organisms form a major diet for fish,

c. Future biodiversity surveys in the area need to be expanded to capture information on breeding, feeding and reproductive biology and ecology of the fish species studied. The above suggested studies should all be concurrently undertaken with regard to seasonal variations (i.e. wet and dry seasons).

d. Prior to any development activities, such as road construction, avoidance strategies need to be put in place to protect critical fish habitats especially the rivers, streams, river-lake interface and vegetated shorelines and lagoons.

e. The experimental fishing technique employed (electro-fishing) proved very effective considering the short period allowed and fishing time (day) for all fish species. It is therefore recommended for future use during long term monitoring.

f. In future monitoring studies, fish tagging techniques are recommended for incorporation especially to establish migration patterns and home ranges of the keystone species.

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Appendices

(a)

(b)

Key to the photographs

- *Brycinus nurse* caught by fishermen from one of the rivers in the study area. It is a delicacy to many people near these water bodies where they deep fry and eat it in that form.
- Another fish species *Auchenoglanis occidentalis* (the giraffe catfish), is an African catfish. It eats plants off the floor of lakes and streams,
- One of the flood plains on the Kisiabi-Kabolwa road. They provide an opportunity for fishing during the rainy season.
- Animals watering from from one of the rivers within the study area.

APPENDIX 5.5: FLORAL INVENTORY

BASELINE FLORAL ASSESSMENT FOR THE PROPOSED GRAVEL ROADS UPGRADE SUB-PROJECTS IN BULIISA DISTRICT UNDER THE ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT, MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

TREES WITHIN THE RIGHT OF WAY (RoW) OF THE PROPOSED ROADS

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August, 2017

Appendix 5.5.1: Trees within the Right of Way (RoW) of the Ngwedo-Bikorongo-Ndandamire Road

S.No	Local name (Lugungu)	Scientific name	Family	IUCN Status	Side of the existing road		Height (m)	Village	Diameter Classes (cm)											Distance from centre of existing road (m)								Tree owner	Recommendation	DBRing, felling and biomass disposal estimated costs (Ug Shs)	Forest Permit cost estimates (Ug Shs
					L	R			<3 = r	3 to 6	7 to 11	12 to 16	17 to 21	22 to 26	27 to 30	31 to 35	36 to 40	>40	TOTAL	0 - 2	2.1 - 2.5	2.6 - 3	3.1 - 3.5	3.6 - 4	4.1 - 4.5	4.6 - 5	>5				
1	Bikoni	Euphorbia tirucali L.	Euphorbiaceae	LC	1		1.5	Ndandamire				1														1		St.Mary's HC III, Kigwera	DBR	25,000	100,000
2	Mununde	Tamarindus indica L.	Fabaceae	NE		1	4	Ndandamire										1				1						Ndadamire Catholic C	Fell	50,000	200,000
3	Mukunkulu	Crateva adansonii DC	Capparaceae	NE		1	1	Ndandamire			1															1		Bekonga Augustine	DBR	25,000	100,000
4	Mukonkolo	Crateva adansonii DC	Capparaceae	NE		1	1	Ndandamire				1														1		Bekonga Augustine	DBR	25,000	100,000
5	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1													1					Bekonga Augustine	Fell	50,000	200,000
6	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1													1					Bekonga Augustine	Fell	50,000	200,000
7	Mukunkulu	Crateva adansonii DC	Capparaceae	NE		1	1.2	Ndandamire				1												1				Ntarwete family	DBR	25,000	100,000
8	Mukunkulu	Crateva adansonii DC	Capparaceae	NE		1	1.2	Ndandamire				1												1				Ntarwete family	DBR	25,000	100,000
9	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	2	Ndandamire					1									1						Baturaki Richard	Fell	200,000	200,000
10	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		1.8	Ndandamire					1											1				Odong	DBR	100,000	100,000
11	Mukunkulu	Crateva adansonii DC	Capparaceae	NE		1	1	Ndandamire				1														1		Genya Family	DBR	25,000	100,000
12	Mukunkulu	Crateva adansonii DC	Capparaceae	NE		1	1	Ndandamire					1													1		Genya Family	DBR	25,000	100,000
13	Mutiira	Erythrococca bongensis Pax	Euphorbiaceae	NE	1		8	Ndandamire				1												1				Musuara Kyomia	DBR	25,000	100,000
14	Mukunkulu	Crateva adansonii DC.	Capparaceae	NE		1	1	Ndandamire						1								1						Musuara Kyomia	Fell	50,000	200,000
15	Mukunkulu	Crateva adansonii DC.	Capparaceae	NE	1			Ndandamire																				Musuara Kyomia	DBR	25,000	100,000
16	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1			Ndandamire						1											1			Isaka	DBR	25,000	100,000
17	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	3	Ndandamire								1								1				Bitadwa Masaula	DBR	25,000	100,000
18	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	3	Ndandamire								1								1				Bitadwa Masaula	DBR	25,000	100,000
19	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		20	Ndandamire						1										1				Wandera Birabila	DBR	25,000	100,000
20	Mukunkulu	Crateva adansonii DC.	Capparaceae	NE	1		8	Ndandamire						1									1					Wandera Birabila	Fell	50,000	200,000

21	Mukaku	Trichilia emetica Vahl	Meliaceae	NE		1	2.5	Ndandamire				1														1		Kosiano Morobi	DBR	25,000	100,000
22	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC	1		1	Ndandamire		1															1			Wilfrd Tugeka	DBR	25,000	100,000
23	Mukaku	Trichilia emetica Vahl	Meliaceae	NE	1		2.5	Ndandamire								1										1		Kasigwa Kajango	DBR	25,000	100,000
24	Mutura	Erythrococca bongensis Pax	Euphorbiaceae	NE	1		3	Ndandamire								1										1		Kasigwa Kajango	DBR	25,000	100,000
25	Mukaku	Trichilia emetica Vahl	Meliaceae	NE		1	4	Ndandamire									1									1		Musingye Julius	DBR	25,000	100,000
26	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
27	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
28	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
29	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
30	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
31	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
32	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
33	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
34	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
35	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
36	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
37	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
38	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
39	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
40	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
41	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
42	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
43	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000
44	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1																1		Ndozereki Bigire	DBR	25,000	100,000

45	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1.5	Ndandamire		1															1		Ndozereki Bigire	DBR	25,000	100,000
46	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		3	Ndandamire										1								1	Amanyire messach	DBR	25,000	100,000
47	Bikoni	Euphorbia tirucali L.	Euphorbiaceae	LC		1	1	Ndandamire		1														1			Bazaare Bigire	DBR	25,000	100,000
48	Bisoga	Jatropha curcas L.	Euphorbiaceae	LC		1	8	Ndandamire		1														1			Bazaare Bigire	DBR	25,000	100,000
49	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
50	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
51	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
52	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
53	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
54	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
55	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
56	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
57	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
58	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
59	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
60	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	25,000	100,000
61	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
62	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1												1					Kamanyire Stephie	Fell	50,000	200,000
63	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1														1			Kamanyire Stephie	DBR	25,000	100,000
64	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1														1			Kamanyire Stephie	DBR	25,000	100,000
65	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1														1			Kamanyire Stephie	DBR	25,000	100,000
66	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1														1			Kamanyire Stephie	DBR	25,000	100,000
67	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1														1			Kamanyire Stephie	DBR	25,000	100,000
68	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1														1			Kamanyire Stephie	DBR	25,000	100,000

69	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
70	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
71	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
72	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
73	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25000	100,000
74	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
75	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
76	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
77	Kasia/Omukasiya	Senna spectabilis(DC.) Irwin & Barneby	Fabaceae	LC		1	1	Ndandamire		1															1			Kamanyire Stephie	DBR	25,000	100,000
78	Mukunkulu	Crateva adansonii DC	Capparaceae	NE	1		1	Ndandamire			1														1			Babihe Nkumire	DBR	25,000	100,000
79	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	2.5	Ndandamire							1								1					Bitadwa david	Fell	50,000	200,000
80	Mukunkulu	Crateva adansonii DC	Capparaceae	NE	1		1	Ndandamire					1										1					wandera Birabila	Fell	50,000	200,000
81	Mutiti	Acacia sieberiana DC	Fabaceae	NE	1		2	Ndandamire						1										1				Camp	DBR	25,000	100,000
82	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		1.5	Ndandamire						1						1								Manyoro	Fell	50,000	200,000
83	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		1.5	Ndandamire					1									1						Ayero Gladys	Fell	50,000	200,000
84	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	2	Ndandamire						1						1								Maragalia Bwana	Fell	50,000	200,000
85	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	1	Ndandamire					1									1						Maragalia Bwana	Fell	50,000	200,000
86	Mutiti	Acacia sieberiana DC	Fabaceae	NE		1	2.5	Bikongoro							1											1			Maragalia Bwana	DBR	25,000	100,000
87	Mutiti	Acacia sieberiana DC	Fabaceae	NE		1	1.5	Bikongoro				1														1			Bikara Jane	DBR	25,000	100,000
88	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		2.5	Bikongoro						1						1								Community grazing land	Fell	50,000	200,000
89	Mununde	Tamarindus indica L.	Fabaceae	NE	1		2	Bikongoro						1										1				Community grazing land	DBR	25,000	100,000
90	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	1.5	Bikongoro				1												1				Community grazing land	DBR	25,000	100,000
91	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE		1	2	Bikongoro				1														1			Community grazing land	DBR	25,000	100,000
92	Mititi	Acacia sieberiana DC	Fabaceae	NE		1	2.2	Bikongoro				1														1			Community grazing land	DBR	25,000	100,000
93	Mutora	Erythrococca bongensis Pax	Euphorbiaceae	NE		1	1.5	Bikongoro					1													1			Community grazing land	DBR	25,000	100,000

94	Musinyi	Albizia coriara Welw. ex Oliv.	Fabaceae	NE		1	2	Bikongoro				1													1				Community grazing land	DBR	25,000	100,000
95	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	2.2	Bikongoro				1															1		Community grazing land	DBR	25,000	100,000
96	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		2	Bikongoro			1												1						Community grazing land	Fell	50,000	200,000
97	Mutete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		1.8	Bikongoro		1															1				Community grazing land	DBR	25,000	100,000
98	Mukolyo	Terminalia schimperiana Hochst ex Engl. & Diels	Combretaceae	NE	1		3	Bikongoro		1																	1		Community grazing land	DBR	25,000	100,000
99	Mutura	Erythrococca bongensis Pax	Euphorbiaceae	NE	1		4.5	Bikongoro		1																	1		Community grazing land	DBR	25,000	100,000
100	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		3	Bikongoro			1															1			Community grazing land	DBR	25,000	100,000
101	Musisye	Albizia coriara Welw. ex Oliv.	Fabaceae	NE		1	4	Bikongoro				1													1				Community grazing land	DBR	25,000	100,000
102	Musisye	Albizia coriara Welw. ex Oliv.	Fabaceae	NE	1		4.4	Bikongoro						1													1		Bisekwa Kiiza	DBR	25,000	100,000
103	Mukasima	Acacia senegal (L.) Willd.	Fabaceae	NE	1		6	Bikongoro		1																	1		Bisekwa Kiiza	DBR	25,000	100,000
104	Mutura	Erythrococca bongensis Pax	Euphorbiaceae	NE		1	1.5	Bikongoro				1													1				Bisekwa Kiiza	DBR	25,000	100,000
105	Mukunkulu	Crateva adansonii DC	Capparaceae	NE	1		5.5	Bikongoro		1																1			Bisekwa Kiiza	DBR	25,000	100,000
106	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		2	Bikongoro				1															1		Bisekwa Kiiza	DBR	25,000	100,000
107	Mukunkulu	Crateva adansonii DC	Capparaceae	NE	1		5	Bikongoro		1															1				Bisekwa Kiiza	DBR	25,000	100,000
108	Musongi	Antiaris toxicaria	Moraceae	NE	1		2	Bikongoro						1											1				Bisekwa Kiiza	DBR	25,000	100,000
109	Mukolyo	Terminalia schimperiana Hochst ex Engl. & Diels	Combretaceae	NE		1	2.5	Bikongoro		1																	1		Bisekwa Kiiza	DBR	25,000	100,000
110	Acacia	Acacia hockii De Wild.	Fabaceae	NE		1	1.5	Bikongoro		1															1				Kizige Julius	DBR	25,000	100,000
111	Mukaku	Trichilia emetica Vahl	Meliaceae	NE		1	2	Bikongoro				1													1				Kizige Julius	DBR	25,000	100,000
112	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		2	Bikongoro				1															1		Kizige Messach	DBR	25,000	100,000
	TOTAL				30	82				62	4	18	7	11	2	4	1	2		3	0	22	3	19	21	42	1			**3,450,000**	**13,800,000**

Note: Plants that are within 3.5m from the existing road centre line are recommended for felling while those beyond 3.5m from the existing road centre line are recommended for de-branching (DBR) to minimize loss of vegetation within the project area.
IUCN=International Union for Conserrvation of Nature and Natural Resources; NE=Not evaluated; LC=Least Concern.

Appendix 5.5.2: Trees within the Right of Way (RoW) of the Kisiabi-Kabolwa Road

S.No	Local name	Scientific name	Family name	IUCN Status	Side of the existing road		Height (m)	Village	Diameter Classes (cm)											Distance from centre of existing road (m)								Tree owner	Recommendation	Debrachining, felling and biomass disposal estimated costs (Ug Shs)	Forest Permit cost estimates (Ug Shs)
					L	R			<3 = r	3 to 6	7 to 11	12 to 16	17-21	22-26	27-30	31-35	36-40	>40	TOTAL	0 – 2	2.1 - 2.5	2.6 – 3	3.1 - 3.5	3.6 - 4	4.1 - 4.5	4.6 - 5	>5				
1	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	2.5	Gigoya						1					1							1		Gov't Land	DBR	25,000	100,000
2	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	2	Gigoya					1						1					1				Byaruhanga M	DBR	25,000	100,000
3	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	1.5	Gigoya					1						1			1						Kamanyire	Fell	50,000	200,000
4	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		1.5	Gigoya		1									1							1		Gatanza Rembo	DBR	25,000	100,000
5	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	1	Gigoya		1									1							1		Gatanza Rembo	DBR	25,000	100,000
6	Munonde	*Tamarindus indica* L.	Fabaceae	NE		1	4	Gigoya					1						1								1	Gatanza Rembo	DBR	25,000	100,000
7	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	2	Gigoya				1							1						1			Gatanza Rembo	DBR	25,000	100,000
8	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1.5	Gigoya			1								1						1			Gatanza Rembo	DBR	25,000	100,000
9	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		1.5	Gigoya				1							1					1				Gatanza Rembo	DBR	25,000	100,000
10	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1.5	Gigoya				1							1					1				Grazing Land	DBR	25,000	100,000
11	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1.5	Gigoya				1							1							1			DBR	25,000	100,000
12	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	2	Gigoya					1						1							1		Grazing Land	DBR	25,000	100,000
13	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1.5	Gigoya				1							1					1				Grazing Land	DBR	25,000	100,000
14	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1.5	Gigoya			1								1								1	Grazing Land	DBR	25,000	100,000
15	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	1.5	Gigoya		1									1							1		Grazing Land	DBR	25,000	100,000
16	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		2	Gigoya				1							1								1	Grazing Land	DBR	25,000	100,000
17	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	1.5	Gigoya		1									1								1	Grazing Land	DBR	25,000	100,000
18	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	1.5	Gigoya		1									1								1	Grazing Land	DBR	25,000	100,000
19	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	2.5	Gigoya								1			1								1	Nyakato Naome	DBR	25,000	100,000
20	Mutiiti	*Tamarindus indica* L.	Fabaceae	NE	1		4	Gigoya								1			1								1	Kiguliech	DBR	25,000	100,000
21	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	2	Gigoya				1							1								1	Kiguliech	DBR	25,000	100,000
22	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		3	Gigoya					1						1								1	Kiguliech	DBR	25,000	100,000
23	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	3	Gigoya						1					1								1	Kiguliech	DBR	25,000	100,000
24	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1.2	Gigoya			1								1							1		Grazing Land	DBR	25,000	100,000
25	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	1.5	Gigoya		1									1							1		Grazing Land	DBR	25,000	100,000
26	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	1.5	Gigoya				1							1								1	Grazing Land	DBR	25,000	100,000
27	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	20	Gigoya				1							1								1	Grazing Land	DBR	25,000	100,000
28	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		0.8	Gigoya		1									1							1		Grazing Land	DBR	25,000	100,000
29	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		0.8	Gigoya		1									1							1		Grazing Land	DBR	25,000	100,000
30	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		1	Gigoya			1								1								1	Grazing Land	DBR	25,000	100,000
31	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		5	Gigoya				1							1								1	Grazing Land	DBR	25,000	100,000
32	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		3	Gigoya				1							1								1	Grazing Land	DBR	25,000	100,000
33	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
34	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
35	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
36	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
37	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
38	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
39	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000

40	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
41	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
42	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
43	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
44	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
45	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
46	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
47	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
48	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
49	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
50	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
51	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
52	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
53	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
54	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
55	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
56	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
57	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
58	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
59	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
60	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
61	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
62	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
63	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
64	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
65	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
66	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
67	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
68	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
69	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
70	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
71	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
72	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
73	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1										1						1			Obemu Ismael	DBR	25,000	100,000
74	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	6	Kaboolwa				1							1		1							Obemu Ismael	Fell	50,000	200,000
75	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE	1		7	Kaboolwa				1							1				1					Aquda Francis	DBR	25,000	100,000
76	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	8	Kaboolwa				1							1						1			Ayesiga Rose	DBR	25,000	100,000
77	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	8	Kaboolwa				1							1						1			Lukamu Tomasi	DBR	25,000	100,000
78	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	8	Kaboolwa					1						1						1			Lukamu Tomasi	DBR	25,000	100,000
79	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	9.5	Kaboolwa						1					1							1		Kwikiriza Diana	DBR	25,000	100,000
80	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	9	Kaboolwa						1					1				1					Bigirenkya Elphaz	DBR	25,000	100,000
81	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		1	Kaboolwa	1										1			1						Wandera Madaki	Fell	50,000	200,000
82	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1							1		Abiyola Kiiza	DBR	25,000	100,000
83	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1							1		Abiyola Kiiza	DBR	25,000	100,000
84	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1							1		Abiyola Kiiza	DBR	25,000	100,000
85	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1							1		Abiyola Kiiza	DBR	25,000	100,000
86	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1							1		Abiyola Kiiza	DBR	25,000	100,000

87	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
88	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
89	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
90	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
91	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
92	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
93	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
94	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa			1								1						1		Abiyola Kiiza	DBR	25,000	100,000
95	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	8	Kaboolwa							1				1						1		Barugahare David	DBR	25,000	100,000
96	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	8	Kaboolwa							1				1				1				Barugahare David	Fell	50,000	200,000
97	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	9	Kaboolwa				1							1				1				Barugahare David	Fell	50,000	200,000
98	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	8	Kaboolwa						1					1				1				Barugahare David	Fell	50,000	200,000
99	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		0.8	Kaboolwa	1										1	1							Chandia Moses	Fell	50,000	200,000
100	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		1.1	Kaboolwa	1										1					1			Chandia Moses	DBR	25,000	100,000
101	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		9	Kaboolwa							1				1					1			Nyongi Godfrey	DBR	25,000	100,000
102	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	11	Kaboolwa							1				1			1					Muhanqi Cosam	Fell	50,000	200,000
103	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	7	Kaboolwa				1							1						1		Kandore Maxwell	DBR	25,000	100,000
104	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		6	Kaboolwa				1							1					1			Katurinde Njuguju	DBR	25,000	100,000
105	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa				1							1							1	Oryela Alfred	DBR	25,000	100,000
106	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa					1						1						1		Oryela Alfred	DBR	25,000	100,000
107	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE		1	7	Kaboolwa				1							1				1				Oryela Alfred	Fell	50,000	200,000
108	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE		1	7.5	Kaboolwa					1						1			1					Oryela Alfred	Fell	50,000	200,000
109	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa					1						1					1			Okumu John	DBR	25,000	100,000
110	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa					1						1					1			Okumu John	DBR	25,000	100,000
111	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE		1	7	Kaboolwa					1						1				1				Katusabe Mudaaki	DBR	25,000	100,000
112	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		1.5	Kaboolwa										1	1						1		Asiimwe Mudaaki	DBR	25,000	100,000
113	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa				1							1						1		Wendi margraet	DBR	25,000	100,000
114	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa				1							1						1		Wendi margraet	DBR	25,000	100,000
115	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE		1	6	Kaboolwa			1								1						1		Wendi margraet	DBR	25,000	100,000
116	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		9	Kaboolwa						1					1						1		Byenkya Tunduru	DBR	25,000	100,000
117	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
118	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
119	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
120	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
121	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
122	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
123	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
124	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
125	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
126	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
127	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
128	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
129	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000
130	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1										1				1				kamanyire Uzinga	DBR	25,000	100,000

131	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
132	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
133	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
134	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
135	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
136	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
137	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
138	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
139	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
140	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
141	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
142	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
143	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
144	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
145	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
146	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
147	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
148	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		3	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
149	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		25	Kaboolwa	1									1			1						kamanyire Uzinga	Fell	50,000	200,000
150	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		25	Kaboolwa	1									1			1						kamanyire Uzinga	Fell	50,000	200,000
151	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		25	Kaboolwa	1									1			1						kamanyire Uzinga	Fell	50,000	200,000
152	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		25	Kaboolwa	1									1			1						kamanyire Uzinga	Fell	50,000	200,000
153	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		25	Kaboolwa	1									1			1						kamanyire Uzinga	Fell	50,000	200,000
154	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		1	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
155	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		1	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
156	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		1	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
157	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		1	Kaboolwa	1									1					1				kamanyire Uzinga	DBR	25,000	100,000
158	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		6	Kaboolwa			1							1						1			Muhangi Cosam	DBR	25,000	100,000
159	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		6	Kaboolwa			1							1						1			Aduba Japier	DBR	25,000	100,000
160	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		9	Kaboolwa			1							1						1			Aduba Japier	DBR	25,000	100,000
161	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		9	Kaboolwa				1						1						1			Aduba Japier	DBR	25,000	100,000
162	Umbrella	*Terminalia mantaly* H. Perrier	Combretaceae	NE	1		7	Kaboolwa				1						1			1						Aduba Japier	Fell	50,000	200,000
163	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		4.5	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
164	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
165	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
166	Neem	*Azadirachta indica* A. Juss	Meliaceae	NE	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
167	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
168	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
169	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
170	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
171	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
172	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
173	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
174	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
175	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
176	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
177	Muyembe	*Mangifera indica* L.	Anacardiaceae	DD	1		6	Kaboolwa				1						1						1			Asiimwe Ofuka	DBR	25,000	100,000
178	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE	1		0.9	Kaboolwa	1									1							1		Kato	DBR	25,000	100,000
179	Bisoga/Kisoga	*Jatropha curcas* L.	Euphorbiaceae	NE		1	1.1	Kaboolwa	1									1							1		Kato	DBR	25,000	100,000

180	Kasitaani	*Thevetia peruviana* (Pers.) K. Schum.	Apocynaceae	NE	1		5.5	Kaboolwa			1								1							1		Kanyunya Rashidi	DBR	25,000	100,000
181	Kasitaani	*Thevetia peruviana* (Pers.) K. Schum.	Apocynaceae	NE	1		5.5	Kaboolwa			1								1							1		Kanyunya Rashidi	DBR	25,000	100,000
	TOTAL								**87**	**8**	**23**	**39**	**11**	**6**	**4**	**2**	**0**	**1**	**181**	**1**	**1**	**10**	**4**	**45**	**51**	**53**	**16**			**4,925,000**	**19,700,000**

Note: Plants that are within 3.5m from the existing road centre line are recommended for felling while those beyond 3.5m from the existing road centre line are recommended for de-branching (DBR) to minimize loss of vegetation within the project area. IUCN=International Union for Conservation of Nature and Natural Resources; NE=Not evaluated; LC=Least Concern.

Appendix 5.5.3: Trees within the Right of Way (RoW) of the Buliisa-Bugana Road

S/N	Local/ English name	Scientific name	Family	ICUN Status	Side of the existing road		Height (m)	Village	Diameter Classes (cm)											Distance from centre of existing road (m)								Tree owner	Recommendation	DBRing, felling and biomass disposal estimated costs (Ug Shs)	Forest permitt cost estimates (Ug Shs)
					L	R			<3 = r	3 to 6	7 to 11	12 to 16	7 to 11	12 to 16	27-30	31-35	36-40	>40	Total	0 - 2	2.1 - 2.5	2.6 - 3	3.1 - 3.5	3.6 – 4	4.1 - 4.5	4.6 - 5	Total				
1	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	0.9	Kikyokye	1																	1		Katusiime William	DBR	25,000	100,000
2	Mukoora	*Combretum collinum* Fresen	Combretaceae	NE	1		1.4	Kikyokye	1																	1		Katusiime William	DBR	25,000	100,000
3	Mukoora	*Combretum collinum* Fresen	Combretaceae	NE	1		1.2	Kikyokye	1																1			Katusiime William	DBR	25,000	100,000
4	Musiisi/Musisye	*Albizia coriara* Welw. ex Oliv.	Fabaceae	NE		1	15	Kikyokye										1								1		Katusiime William	DBR	25,000	100,000
5	Mukoma	*Grewia mollis* Juss.	Malvaceae	NE	1		1.6	Kikyokye	1																	1		Kyamanywa Bihangire	DBR	25,000	100,000
6	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		2	Kikyokye	1																	1		Kyamanywa Bihangire	DBR	25,000	100,000
7	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	5	Kikyokye				1														1		Bamuturaki Naphtali	DBR	25,000	100,000
8	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	2	Kikyokye	1																	1		Bamuturaki Naphtali	DBR	25,000	100,000
9	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	2.5	Kikyokye	1																	1		Bamuturaki Naphtali	DBR	25,000	100,000
10	Mukunkulu	*Crateva adansonii* DC	Capparaceae	NE		1	0.3	Kikyokye	1														1					Gubaza Gahwera	Fell	50,000	100,000
11	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.7	Kikyokye	1												1							Musunga George	Fell	50,000	200,000
12	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.5	Kikyokye	1													1						Musunga George	Fell	50,000	200,000
13	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE		1	0.9	Kikyokye	1															1				Gubaza Gahwera	DBR	25,000	100,000
14	Mutiti	*Acacia sieberiana* DC	Fabaceae	NE		1	0.7	Kikyokye	1															1				Musunga George	DBR	25,000	100,000
15	Mukunkulu	*Crateva adansonii* DC	Capparaceae	NE		1	0.4	Kikyokye	1																	1		Musunga George	DBR	25,000	100,000
16	Mukunkulu	*Crateva adansonii* DC	Capparaceae	NE	1		0.6	Kikyokye	1																	1		Musunga George	DBR	25,000	100,000
17	Mukunkulu	*Crateva adansonii* DC	Capparaceae	NE	1		0.6	Kikyokye	1																	1		Musunga George	DBR	25,000	100,000
18	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.8	Kikyokye	1															1				Musunga George	DBR	25,000	100,000
19	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		1.9	Kikyokye	1																	1		Musunga George	DBR	25,000	100,000
20	Mukoma	*Grewia mollis* Juss.	Malvaceae	NE	1		0.4	Kikyokye	1																	1		Kasoona Yokisani	DBR	25,000	100,000
21	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.3	Kikyokye	1															1				Kasoona Yokisani	DBR	25,000	100,000
22	Mubumbula	Hoslundia opposita Vahl.	Lamiaceae	NE	1		0.6	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
23	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE	1		3.8	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
24	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE	1		3.8	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
25	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE	1		3.8	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
26	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE	1		3.8	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
27	Mukasiya	*Senna siamea* (Lam.) Irwin et Barneby	Fabaceae	NE	1		3.8	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
28	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE		1	0.5	Kikyokye	1													1						Nyamazawo James	Fell	50,000	200,000
29	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		0.3	Kikyokye	1													1						Isingoma Mikaaya	Fell	50,000	200,000
30	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		1	Kikyokye	1																	1		Isingoma Mikaaya	DBR	25,000	100,000
31	Mutiiti	*Acacia sieberiana* DC	Fabaceae	NE	1		0.7	Kikyokye	1															1				Isingoma Mikaaya	DBR	25,000	100,000
32	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		1	Kikyokye	1																	1		Isingoma Mikaaya	DBR	25,000	100,000
33	Mutuula	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.4	Kikyokye	1													1						Isingoma Mikaaya	Fell	50,000	200,000
34	Mutuula	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.4	Kikyokye	1															1				Isingoma Mikaaya	DBR	25,000	100,000
35	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		0.9	Kikyokye	1																	1		Isingoma Mikaaya	DBR	25,000	100,000
36	Mutuula	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.7	Kikyokye	1																	1		Isingoma Mikaaya	DBR	25,000	100,000
37	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		0.8	Kikyokye	1																	1		Kasoono Seezi	DBR	25,000	100,000
38	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	0.5	Kikyokye	1														1					Isingoma Mikaaya	Fell	50,000	200,000
39	mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		0.5	Kikyokye	1														1					Isingoma Mikaaya	Fell	50,000	200,000

40	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
41	Mukabyakabya	Maerua triphylla A. Rich	Capparaceae	NE	1		0.4	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
42	Muteete	Balanites aegyptiaca (Linn.) Del.	Balantiaceae	NE	1		0.3	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
43	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.6	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
44	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.6	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
45	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.7	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
46	Musisi/Musisye	Albizia coriara Welw. ex Oliv.	Fabaceae	NE		1	0.9	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
47	Mukalasima	*Acacia senegal* (L.) Wild.	Fabaceae	NE		1	0.3	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
48	Mukodoyi	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	2.1	Kikyokye			1												1				Kasoono Seezi	DBR	25,000	100,000
49	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.5	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
50	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
51	Mukodoyi	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.4	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
52	Mukodoyi	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.4	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
53	Mukodoyi	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.4	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
54	Mukodoyi	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.4	Kikyokye	1														1				Isingoma Mikaaya	DBR	25,000	100,000
55	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	0.4	Kikyokye	1																1		Kasoono Seezi	DBR	25,000	100,000
56	Musisi/Musisye	Albizia coriara Welw. ex Oliv.	Fabaceae	NE		1	0.5	Kikyokye	1																1		Kasoono Seezi	DBR	25,000	100,000
57	Mutunqatunqa	Capparis erythrocarpos Isert	Capparaceae	NE		1	0.3	Kikyokye	1															1			Kasoono Seezi	DBR	25,000	100,000
58	Musisi/Musisye	Albizia coriara Welw. ex Oliv.	Fabaceae	NE		1	1.2	Kikyokye	1																1		kasoono seezi	DBR	25,000	100,000
59	Mukabyakabya	*Maerua triphylla* A. Rich	Capparaceae	NE		1	0.3	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
60	Mukabyakabya	*Maerua triphylla* A. Rich	Capparaceae	NE		1	0.6	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
61	Munongo	*Albizia zygia* (DC.) J.F.Macbr.	Fabaceae	NE		1	0.3	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
62	Mulkololoko	*Maerua angolensis* DC.	Capparaceae	NE		1	0.5	Kikyokye	1														1				Kiiza Jadeon	DBR	25,000	100,000
63	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
64	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
65	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
66	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
67	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
68	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Kikyokye	1															1			Isingoma Mikaaya	DBR	25,000	100,000
69	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE		1	0.5	Kikyokye	1																1		Kiiza Jadeon	DBR	25,000	100,000
70	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE		1	0.7	Kikyokye	1																1		kasoono seezi	DBR	25,000	100,000
71	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.4	Kikyokye	1															1			Kasoono seezi	DBR	25,000	100,000
72	Munongo	*Albizia zygia* (DC.) J.F.Macbr.	Fabaceae	NE	1		0.2	Kikyokye	1															1			Kasoono Seezi	DBR	25,000	100,000
73	Musisi/Musisye	*Albizia coriara* Welw. ex Oliv.	Fabaceae	NE	1		0.4	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
74	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		6.8	Kikyokye								1									1		Kasoono Seezi	DBR	25,000	100,000
75	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		6.8	Kikyokye							1										1		Kasoono Seezi	DBR	25,000	100,000
76	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.4	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
77	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.4	Kikyokye	1														1				Kasoono Seezi	DBR	25,000	100,000
78	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.2	Kikyokye	1												1						Kasoono Seezi	Fell	50,000	200,000
79	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.3	Kikyokye	1																1		Kasoono Seezi	DBR	25,000	100,000
80	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE		1	0.6	Kikyokye	1															1			Kiiza Jadeon	DBR	25,000	100,000
81	Mukalasima	*Acacia senegal* (L.) Wild.	Fabaceae	NE	1		10.5	Kikyokye					1												1			DBR	25,000	100,000
82	Muzuluyi	*Euphorbia candelabrum* Trémaux ex Kotschy	Cactaceae	NE	1		2.6	Kikyokye			1														1			DBR	25,000	100,000
83	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.6	Kikyokye	1																1			DBR	25,000	100,000

84	Mutiliti	*Acacia sieberiana* DC	Fabaceae	NE	1		12	Kikyokye									1									1			DBR	25,000	100,000
85	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		9	Kikyokye						1												1			DBR	25,000	100,000
86	Mukwakwa	*Ziziphus pubescens* Oliv	Rhamnaceae	NE		1	6	Kikyokye			1														1				DBR	25,000	100,000
87	Mukwakwa	*Ziziphus pubescens* Oliv	Rhamnaceae	NE		1	35	Kikyokye			1															1			DBR	25,000	100,000
88	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	0.9	Kikyokye	1																	1			DBR	25,000	100,000
89	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		0.3	Kikyokye	1																1				DBR	25,000	100,000
90	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		0.4	Kikyokye	1														1						Fell	50,000	200,000
91	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		9.5	Kikyokye			1															1			DBR	25,000	100,000
92	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1		Kikyokye	1																1				DBR	25,000	100,000
93	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1		Kikyokye							1										1				DBR	25,000	100,000
94	Albizia coriaria	*Albizia coriara* Welw. ex Oliv.	Fabaceae	NE	1		9	Kikyokye					1										1						Fell	50,000	200,000
95	Albizia coriaria	*Albizia coriara* Welw. ex Oliv.	Fabaceae	NE		1	1.9	Kikyokye	1																	1			DBR	25,000	100,000
96	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	8	Kikyokye					1												1				DBR	25,000	100,000
97	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		7.5	Kikyokye							1										1				DBR	25,000	100,000
98	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	7	Kikyokye							1										1				DBR	25,000	100,000
99	Cactus	*Euphorbia candelabrum* Trémaux ex Kotschy	Cactaceae	NE	1		3.5	Kikyokye			1															1			DBR	25,000	100,000
100	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		3	Kikyokye				1														1			DBR	25,000	100,000
101	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		9	Kikyokye									1									1			DBR	25,000	100,000
102	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		9	Kikyokye									1									1			DBR	25,000	100,000
103	Balanites	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE			9	Kikyokye									1									1			DBR	25,000	100,000
104	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.8	Nyapeya	1															1					Kasaano Seezi	Fell	50,000	200,000
105	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.9	Nyapeya	1																1				Kisawu Muganzi	DBR	25,000	100,000
106	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.9	Nyapeya	1																1				Kisawu Muganzi	DBR	25,000	100,000
107	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.9	Nyapeya	1																1				Kisawu Muganzi	DBR	25,000	100,000
108	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.7	Nyapeya	1																	1			Kisawu Muganzi	DBR	25,000	100,000
109	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.7	Nyapeya	1																	1			Kisawu Muganzi	DBR	25,000	100,000
110	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.7	Nyapeya	1																	1			Kisawu Muganzi	DBR	25,000	100,000
111	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.7	Nyapeya	1																	1			Kisawu Muganzi	DBR	25,000	100,000
112	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.9	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
113	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.9	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
114	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.9	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
115	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.9	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
116	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.4	Nyapeya	1														1						Kasaano Seezi	Fell	50,000	200,000
117	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		1	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
118	Mutiti (Lugungu), Etirir (Ateso)	*Acacia sieberiana* DC	Fabaceae	NE	1		1.4	Nyapeya	1															1					Kisawu Muganzi	Fell	50,000	200,000
119	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.5	Nyapeya	1														1						Kasaano Seezi	Fell	50,000	200,000
120	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.7	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
121	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.7	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
122	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.4	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
123	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Nyapeya	1																1				Kisawu Muganzi	DBR	25,000	100,000
124	Mutungutungu	*Capparis erythrocarpos* Isert	Capparaceae	NE	1		0.4	Nyapeya	1																1				Kisawu Muganzi	DBR	25,000	100,000
125	Mutungutungu	*Capparis erythrocarpos* Isert	Capparaceae	NE	1		0.4	Nyapeya	1																	1			Kisawu Muganzi	DBR	25,000	100,000
126	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.3	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
127	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.3	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
128	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.3	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000
129	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.3	Nyapeya	1																1				Kasaano Seezi	DBR	25,000	100,000

130	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		0.3	Nyapeya	1															1				Kasaano Seezi	DBR	25,000	100,000
131	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.3	Nyapeya	1															1				Kasaano Seezi	DBR	25,000	100,000
132	Munongo	*Albizia zygia* (DC.) J.F.Macbr.	Fabaceae	NE	1		0.2	Nyapeya	1																1			Kisawu Muganzi	DBR	25,000	100,000
133	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		1.9	Nyapeya		1															1			Kisawu Muganzi	DBR	25,000	100,000
134	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		2	Nyapeya			1															1		Kisawu Muganzi	DBR	25,000	100,000
135	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		2	Nyapeya			1															1		Kisawu Muganzi	DBR	25,000	100,000
136	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.5	Nyapeya	1															1				Kisawu Muganzi	DBR	25,000	100,000
137	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		2	Nyapeya				1														1		Tullow Oil	DBR	25,000	100,000
138	Muteete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		7.5	Nyapeya										1								1		Magambo Mlini	DBR	25,000	100,000
139	Musisya (Albizia coriaria)	*Albizia coriara* Welw. ex Oliv.	Fabaceae	NE		1	8.5	Nyapeya				1														1		Kintaboyine Perez	DBR	25,000	100,000
140	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	7.9	Nyapeya										1								1		Mwesigwa Gusalire	DBR	25,000	100,000
141	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	0.4	Nyapeya	1														1					Kamanyire	Fell	50,000	80,000
142	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	6	Nyapeya										1								1		Kamanyire	DBR	25,000	100,000
143	Mutiti (Lugungu), Etiiri (Ateso)	*Acacia sieberiana* DC	Fabaceae	NE	1		9	Nyapeya										1								1		Kolokiya Mutanta	DBR	25,000	100,000
144	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		8	Nyapeya										1								1		Kolokiya Mutanta	DBR	25,000	100,000
145	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	6.5	Nyapeya										1						1				Isaka George	Fell	50,000	200,000
146	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	9	Nyapeya										1								1		Bright	DBR	25,000	100,000
147	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	6	Nyapeya				1						1								1		Bright	DBR	25,000	100,000
148	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		11	Kijangi										1							1			Kasaano Seezi	DBR	25,000	100,000
149	Munongo	*Albizia zygia* (DC.) J.F.Macbr.	Fabaceae	NE	1		2.5	Kijangi				1														1		Kasaano Seezi	DBR	25,000	100,000
150	Munongo	*Albizia zygia* (DC.) J.F.Macbr.	Fabaceae	NE	1		2.5	Kijangi				1														1		Kasaano Seezi	DBR	25,000	100,000
151	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	6.8	Kijangi						1											1			Gobolya William	DBR	25,000	100,000
152	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.5	Kijangi	1																1			Magambo Mlini	DBR	25,000	100,000
153	Munongo	*Albizia zygia* (DC.) J.F.Macbr.	Fabaceae	NE	1		0.3	Kijangi	1																1			Magambo Mlini	DBR	25,000	100,000
154	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	9	Kijangi					1													1		Magambo Mlini	DBR	25,000	100,000
155	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	9	Kijangi				1														1		Tibenda Kisawo	DBR	25,000	100,000
156	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1		0.4	Kijangi	1															1				Magambo Mlini	DBR	25,000	100,000
157	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE		1	0.4	Kijangi	1															1				Tibenda Kisawo	DBR	25,000	100,000
158	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE	1	1	11	Kijangi							1											1		Magambo Mlini	DBR	25,000	100,000
159	Muteete(Balanites)	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		0.5	Kijangi	1													1						Magambo Mlini	Fell	50,000	200,000
160	Mutungatunga	*Capparis erythrocarpos* Isert	Capparaceae	NE	1		0.6	Kijangi	1													1						Magambo Mlini	Fell	50,000	200,000
161	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE		1	0.4	Kijangi	1															1					DBR	25,000	100,000
162	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE		1	0.4	Kijangi	1															1					DBR	25,000	100,000
163	Mukabyakabya	*Meurua triphylla* A.Rich	Capparaceae	NE		1	0.5	Kijangi	1															1					DBR	25,000	100,000
164	Mukabyakabya	*Meurua triphylla* A.Rich	Capparaceae	NE		1	0.5	Kijangi	1															1					DBR	25,000	100,000
165	Mukabyakabya	*Meurua triphylla* A.Rich	Capparaceae	NE		1	0.5	Kijangi	1															1					DBR	25,000	100,000
166	Mukabyakabya	*Meurua triphylla* A.Rich	Capparaceae	NE		1	0.5	Kijangi	1															1					DBR	25,000	100,000
167	Mulaleke	*Harrisonia abyssinica* Oliv	Rutaceae	NE	1		0.2	Kijangi	1															1					DBR	25,000	100,000
168	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	7	Kijangi						1												1		Gobolya William	DBR	25,000	100,000
169	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	7	Kijangi						1												1		Gobolya William	DBR	25,000	100,000
170	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1															1				Gobolya William	DBR	25,000	100,000
171	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1															1				Gobolya William	DBR	25,000	100,000
172	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1															1				Gobolya William	DBR	25,000	100,000
173	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1															1				Gobolya William	DBR	25,000	100,000

174	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1														1				Gobolya William	DBR	25,000	100,000
175	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1														1				Gobolya William	DBR	25,000	100,000
176	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1														1				Gobolya William	DBR	25,000	100,000
177	Mutuuranume	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	0.3	Kijangi	1														1				Gobolya William	DBR	25,000	100,000
178	Mukodoyi	*Securidaca longipedunculata Fres.*	Combretaceae	NE		1	2.3	Kijangi			1														1		Gobolya William	DBR	25,000	100,000
179	Mukonkolo	*Crateva adansonii* DC.	Capparaceae	NE	1		0.8	Kijangi	1																1			DBR	25,000	100,000
180	Muziluyi	Euphorbia candelabrum Trémaux ex Kotschy	Cactaceae	NE		1	4	Kijangi			1														1		Busingye Luka	DBR	25,000	100,000
181	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	3.6	Kijangi			1														1		Busingye Luka	DBR	25,000	100,000
182	Mukwakwa	*Ziziphus pubescens* Oliv	Rhamnaceae	NE		1	3.5	Kijangi			1														1		Busingye Luka	DBR	25,000	100,000
183	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		2	Kijangi			1														1		Bikalampunda	DBR	25,000	100,000
184	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		2	Kijangi			1														1		Bikalampunda	DBR	25,000	100,000
185	Mukolyo	*Terminalia schimperiana* Hochst ex Engl. & Diels	Combretaceae	NE		1	2.1	Kijangi				1													1		Busingye Luka	DBR	25,000	100,000
186	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		12	Kijangi					1												1		Bikalampunda	DBR	25,000	100,000
187	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	3	Kijangi				1													1		Busingye Luka	DBR	25,000	100,000
188	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE		1	3	Kijangi			1														1		Busingye Luka	DBR	25,000	100,000
189	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		3	Kijangi					1											1			Kasisaki Andereya	DBR	25,000	100,000
190	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		3	Kijangi					1											1			Kasisaki Andereya	DBR	25,000	100,000
191	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardaceae	NE	1		3	Kijangi					1											1			Kasisaki Andereya	DBR	25,000	100,000
192	Mukwakwa	*Ziziphus pubescens* Oliv	Rhamnaceae	NE	1		1.6	Kijangi	1																1		Kasisaki Andereya	DBR	25,000	100,000
193	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		11	Kijangi						1											1		Kasisaki Andereya	DBR	25,000	100,000
194	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		12	Kijangi					1												1		Kasisaki Andereya	DBR	25,000	100,000
195	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		8	Kijangi					1												1		Kasisaki Andereya	DBR	25,000	100,000
196	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		8	Kijangi					1												1		Kasisaki Andereya	DBR	25,000	100,000
197	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		8	Kijangi					1												1		Kasisaki Andereya	DBR	25,000	100,000
198	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		8	Kijangi					1												1		Kasisaki Andereya	DBR	25,000	100,000
199	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		1.3	Kijangi	1																1		Kasisaki Andereya	DBR	25,000	100,000
200	Ngado/Mugando/Bugando	*Acacia hockii* De Wild.	Fabaceae	NE		1	0.5	Kijangi	1															1			Atuha Simon	Fell	50,000	80,000
201	Mugando	*Acacia hockii* De Wild.	Fabaceae	NE		1	0.5	Kijangi	1															1			Atuha Simon	Fell	50,000	80,000
202	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		6.5	Kijangi						1											1		Kasisaki Andereya	DBR	25,000	100,000
203	Mukoma	*Grewia mollis* Juss.	Malvaceae	NE	1		0.1	Kijangi	1																1		Kasisaki Andereya	DBR	25,000	100,000
204	Mukalasima	*Acacia senegal* (L.) Willd.	Fabaceae	NE	1		0.4	Kijangi	1																1		Kasisaki Andereya	DBR	25,000	100,000
205	Mukoma	*Grewia mollis* Juss.	Malvaceae	NE	1		0.4	Kijangi	1																1		Kasisaki Andereya	DBR	25,000	100,000
206	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		6	Kijangi					1												1		Kasisaki Andereya	DBR	25,000	100,000
207	Mudidyo	*Securidaca longipedunculata Fres.*	Polygalaceae	NE	1		6	Kijangi					1												1		Kagoro Budala	DBR	25,000	100,000
208	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		5.8	Kijangi				1													1		Kagoro Budala	DBR	25,000	100,000
209	Muteete(Balanites)	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		11	Kijangi							1										1		Kagoro Budala	DBR	25,000	100,000
210	Mukunkulu	*Crateva adansonii* DC.	Capparaceae	NE		1	1.9	Kijangi	1																1		Bamuturaki Yosani	DBR	25,000	100,000
211	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	9	Kijangi				1											1				Bamuturaki Yosani	DBR	25,000	100,000
212	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		5.6	Kijangi				1												1			Bamuturaki Yosani	DBR	25,000	100,000
213	Musingabakazi	*Lannea schweinfurthii* (Engl.) Engl.	Anacardaceae	NE	1		4	Kijangi				1											1				Asikuha Nicholas	DBR	25,000	100,000
214	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		5	Kijangi					1												1		Asikuha Nicholas	DBR	25,000	100,000
215	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE			4	Kijangi				1													1		Asikuha Nicholas	DBR	25,000	100,000
216	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	4	Kijangi				1													1		Asikuha Nicholas	DBR	25,000	100,000
217	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	4	Kijangi				1													1		Asikuha Nicholas	DBR	25,000	100,000

218	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE		1	4	Kijangi				1														1		Asikuha Nicholas	DBR	25,000	100,000
219	Musingabakazi	Lannea schweinfurthii (Engl.) Engl.	Anacardiaceae	NE		1	7	Kijangi						1												1		Bamuturaki Yosani	DBR	25,000	100,000
220	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		7	Kijangi						1												1		Asikuha Nicholas	DBR	25,000	100,000
221	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		7	Kijangi						1												1		Asikuha Nicholas	DBR	25,000	100,000
222	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	9	Kijangi							1											1		Bamuturaki Yosani	DBR	25,000	100,000
223	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		5	Kijangi					1													1		Byaruhanga Emmanuel	DBR	25,000	100,000
224	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		11	Kijangi										1							1			Byaruhanga Emmanuel	DBR	25,000	100,000
225	Musingabakazi	*Lannea schweinfurthii* (Engl.) Engl.	Anacardiaceae	NE	1		4.9	Kijangi										1								1		Byaruhanga Emmanuel	DBR	25,000	100,000
226	Musingabakazi	*Lannea schweinfurthii* (Engl.) Engl.	Anacardiaceae	NE	1		4.9	Kijangi										1								1		Byaruhanga Emmanuel	DBR	25,000	100,000
227	Mukwakwa	*Ziziphus pubescens* Oliv	Rhamnaceae	NE	1		2	Kijangi	1																	1		Byaruhanga Emmanuel	DBR	25,000	100,000
228	Musingabakazi	*Lannea schweinfurthii* (Engl.) Engl.	Anacardiaceae	NE		1	6	Kijangi									1									1		Tibeijuka Samson	DBR	25,000	100,000
229	Musingabakazi	*Lannea schweinfurthii* (Engl.) Engl.	Anacardiaceae	NE		1	3	Kijangi										1								1		Tibeijuka Samson	DBR	25,000	100,000
230	Mukalasima	*Acacia senegal* (L.) Wild.	Fabaceae	NE		1	2	Kijangi					1													1		Tibeijuka Samson	DBR	25,000	100,000
231	Mukonkolo	*Crateva adansonii* DC.	Capparaceae	NE		1	5.5	Kijangi						1												1		Busingye Luka	DBR	25,000	100,000
232	Muziluyi	*Euphorbia candelabrum* Trémaux ex Kotschy	Cactaceae	NE		1	3.1	Kijangi			1															1		Busingye Luka	DBR	25,000	100,000
233	Mutiti (Lugungu), Etirir (Ateso)	*Acacia sieberiana* DC	Fabaceae	NE	1		6	Kijangi						1												1		Kabagambe Seezi	DBR	25,000	100,000
234	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		7	Kijangi								1										1		Kabagambe Seezi	DBR	25,000	100,000
235	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		7	Kijangi							1											1		Kabagambe Seezi	DBR	25,000	100,000
236	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		7	Kijangi							1											1		Kabagambe Seezi	DBR	25,000	100,000
237	Mutuura	*Erythrococca bongensis* Pax	Euphorbiaceae	NE	1		5.6	Kijangi									1									1		Kasangaki Steven	DBR	25,000	100,000
238	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	1.8	Kijangi	1																	1		Kalisa Antoni	DBR	25,000	100,000
239	Mukunkolo	*Crateva adansonii* DC	Capparaceae	NE	1		4	Kijangi								1										1		Kasangaki Steven	DBR	25,000	100,000
240	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		7.2	Kijangi										1								1		Kasangaki Steven	DBR	25,000	100,000
241	Mutete	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE	1		11	Kijangi										1								1		Kiwaho Celestino	DBR	25,000	100,000
242	Mukaku	*Trichilia emitica* Vahl.	Meliaceae	NE		1	6	Kijangi			1															1		Kalisa Antoni	DBR	25,000	100,000
243	Muteete(Balanites)	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	9	Kijangi										1								1		Wandera Abneli	DBR	25,000	100,000
244	Muteete(Balanites)	*Balanites aegyptiaca* (Linn.) Del.	Balantiaceae	NE		1	9	Kijangi										1								1		Wandera Abneli	DBR	25,000	100,000
245	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		2.5	Kijangi				1														1		Kiwaho Celestino	DBR	25,000	100,000
246	Mukonkolo	*Crateva adansonii* DC	Capparaceae	NE	1		0.5	Kijangi	1																1			Kiwaho Celestino	DBR	25,000	100,000
	TOTAL								**145**	**1**	**17**	**19**	**16**	**13**	**9**	**3**	**6**	**18**	**247**	**0**	**4**	**9**	**8**	**60**	**43**	**122**	**246**			**6,675,000**	**26,240,000**

Note: Plants that are within 3.5m from the existing road centre line are recommended for felling while those beyond 3.5m from the existing road centre line are recommended for de-branching (DBR) to minimize vegetation loss in the project area. IUCN=International Union for Conservation of Nature and Natural Resources; NE=Not evaluated; LC=Least Concern.

APPENDIX 5.6: NOISE AND AIR BASELINE ASSESSMENT

AIR QUALITY AND NOISE ASSESSMENT REPORT FOR BATCH1-SUB-PROJECTS. ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROGRAM (ARSDP)

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Thank you.

AIR QUALITY ACRONYMS

GPS Global Positioning System
ISO International Organization for Standardization
UTM Universal Transverse Mercator
WGS World Geodetic System
PPE Personal protective equipment
AQ - Air Quality
NOx. Nitrogen Oxides
NO2. Nitrogen Dioxides
SO2. Sulphur Dioxide
CO- Carbon Monoxide
PM. Particulate matter
PM10. Particulate matter less than 10 microns in size
PM2.5 - Particulate matter less than 2.5 microns in size
Ug. Micrograms
Ug/m3. Micrograms per metre cubed
Mg/m2/day. Milligrams per metre squared per day
AQS. Air Quality Standard
WHO. World Health Organisation
QA. Quality Assurance
°C. Degrees centigrade
MJ/ m2 . Megajoules per metre squared

GLOSSARY OF TERMS

Ambient Air	The atmospheric environment, outside of buildings, to which the public has access.
Ambient Air Quality	A physical and chemical measure of pollutant concentrations in the ambient atmosphere, measured over a specific period of time.
Air Quality Standard:	Primary ambient air quality standards define the maximum amount of a pollutant that can be present in outdoor air without harming the public's health. Primary standards include an adequate margin of safety to protect the most sensitive individuals in the population. Secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
Point Source	Any place or object from which pollutants are released. Sources that move around (cars, trucks, planes) are categorized as mobile sources. Sources, such as power plants, factories.
Particles	Any solid or liquid matter larger than a molecule (>0.0002 micron diameter). It is composed of settleable matter which will settle as dust within a reasonable period of time and suspended matter which remains suspended in the atmosphere until washed out by precipitation, deposition, or some other process.
Particulate Matter	Dust, soot, and other tiny bits of solid materials that are released into and move around in the air. Particulate matter sources include burning of diesel fuels, road construction, and industrial processes. Particulates 10 microns or less in diameter (approximately seven times smaller than human hair) are classified as PM10. PM2.5 is potentially more hazardous and is defined as particulate matter smaller than 2.5 microns.
Volatile Organic Carbons (VOCS)	Compounds that contain carbon, oxygen, hydrogen, chlorine and other atoms that can evaporate easily into the atmosphere.
Sulphur Dioxide (SO_2)	Sulphur dioxide is an acidic gas, which combines with water vapor in the atmosphere to produce acid rain.
Carbon Monoxide (CO)	-Carbon monoxide is an odourless, colourless and toxic gas.
PPB	Particles per billion
PPM	Particles per million
Sensitive Receptors	These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants.

Low frequency noise	Considered as the frequency range from about 10 Hz – 200 Hz, causes distress to response, within the whole or part of the auditory range, or may be acquired. Onset of low frequency noise a number of people who are sensitive to its effects. The sensitivity may be a result of heightened sensory annoyance tends to occur in middle age.
Decibel	The decibel (dB) is a value describing the logarithmic level of sound or pressure above an arbitrarily chosen reference value.
dBA:	An adjusted decibel value derived by reducing the effect of frequencies below 1,000 Hz and above 6,000 Hz. This weighting reflects normal human hearing frequencies.
LAeq	Is essentially the average sound level. It is defined as the steady sound level that contains the same amount of acoustical energy as a given time-varying sound over the same measurement period.
L10	L10 is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above L10. For the rest of the time, the sound or noise has a sound pressure level at or below L10. These higher sound pressure levels are probably due to sporadic or intermittent events.
L50	L50 is the level exceeded for 50% of the time. It is statistically the mid-point of the noise readings. It represents the median of the fluctuating noise levels.
L90	L90 is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level. It is generally considered to be representing the background or ambient level of a noise environment.
Noise receptors	A location where the unprotected public could be exposed to noise in the environment. For purposes of the evaluation process, receptors are classified as either industrial or nonindustrial.
Industrial receptors	A receptor relating to the operations of the facility that contains the identified noise sources.
Non-industrial receptors	A receptor type such as residential, recreational, commercial, business, agricultural, or a school, hospital, day-care center, trading center, or church.
Noise source	A point of origin of noise, whether privately or publicly owned or operated.

EXECUTIVE SUMMARY

The Ministry of Lands Housing and Urban Development (MLHUD) under the Albertine Sustainable Development Project (ASDP) plans to improve selected rural roads in Hoima and Buliisa to district class III roads. The rehabilitation and upgrading of the selected rural roads to gravel class III (Road Width less than 4m) in Hoima and Buliisa will involve redesigning, widening and strengthening of the existing carriageways. The proposed roads are: Buliisa– Bugana, Kibukwa - Bugana Main, Kisomere - Nuel Camp, Ngwedo -Ndandamire – Bikongoro, in Buliisa district and Kitoba - Kyabasengya-Kaboijana road, Waki-Kiryabutuzi-Mparangasi, Kyakapeya - Kisiita – Kibaire, Bulindi – Waaki-Dwooli – Kibanjwa, Kafo - Kasambya – Wagesa, Kitoba - Icukira – Kigorobya and Kiboirya - Iseisa –Buhamba in Hoima district. This baseline report presents the levels of noise and ambient air quality parameters in the project areas. Baseline air quality measurements for Carbon Dioxide, Carbon Monoxide, Oxygen, Sulphur Dioxide, Nitrogen oxide and Hydrogen Sulphide were carried out using IBRID MX6 Multigas Monitor while the CEM DT-9881 was used for particulate matter (PM 2.5 and PM10) measurements. Baseline noise levels were undertaken using a Center™ Data Logger Sound Level Meter set at 30-130 dB (A) range. Measurements were taken at various receptors i.e. hospitals, schools, daycare facilities, houses, commercial areas and churches and within a 1 km radius of the respective rural gravel roads to be upgraded and rehabilitated.

The findings for baseline air quality results indicate a relatively pristine environment, currently devoid of industrial sources of air pollution. The levels for CO were 0.00-0.04 ppm, SO_2 were 0.00–0.01, H_2S were 0.00-0.04, LEL were 0, NO_2 were 0 and CO_2 were 0.00-1.02. In general, most of the levels were below detectable levels ie (H_2S is 15Ng SO2 is 0.15ppm /m^3, CO is 9.0ppm, NO_2 is 0.10ppm and CO_2 is 9.0ppm) and within the IFC and WHO recommended standard and NEMA (Draft Air Quality Standard for Ambient Air).

Day time noise measurements in thirty seven measured points ranged from 28.1 to 112.9 dBA which were higher than the permissible noise limits as prescribed in the in the National Environment (Noise Standards and Control) Regulations, 2003, for the General Environment (45 dBA). This can mainly be attributed to noise from vehicle traffic.

INTRODUCTION

Background

The Government of Uganda with support of the World Bank (IDA) has initiated the Albertine Region Sustainable Development Project (ARSDP) to facilitate a more orderly, sustainable and inclusive transformation of the Albertine Region through improving local infrastructure and connectivity for rural communities. The project aims to directly benefit people living in the Albertine Region through eliminating bottlenecks to production and distribution of goods and services. The existing earth roads/tracks and on some sections paths cannot serve anticipated growth expected to accrue to oil and gas development.

To address this shortfall, The Ministry of Lands Housing and Urban Development (MLHUD) under the Albertine Sustainable Development Project (ASDP) plans to improve selected rural roads in Hoima and Buliisa to district class III roads (Road Width less than 4m level. The rehabilitation and upgrading of the selected rural roads to gravel class III (Road Width less than 4m) will involve redesigning, widening and strengthening of the existing carriageways. An assessment of ambient air quality and noise was carried out at selected locations to establish the existing baseline air quality and noise levels.

Proposed Roads

The proposed roads namely Buliisa– Bugana, Kibukwa - Bugana Main, Kisomere - Nuel Camp, Ngwedo -Ndandamire – Bikongoro, in Buliisa district and Kitoba - Kyabasengya-Kaboijana road, Waki-Kiryabutuzi-Mparangasi, Kyakapeya - Kisiita – Kibaire, Bulindi – Waaki-Dwooli – Kibanjwa, Kafo - Kasambya – Wagesa, Kitoba - Icukira – Kigorobya and Kiboirya - Iseisa –Buhamba in Hoima district.

Objective

To determine the baseline ambient air quality and noise levels in the proposed project area and at neighboring receptors to form a basis for future impact monitoring.

Scope

For ambient air quality, the assessment focused on the pollutants; SO_2, NO_2, H_2S, LEL, NOx, CO, O_2, and CO_2 as well as Particulate matter (i.e. PM_{10} and $PM_{2.5}$) while measurements for noise were the different levels i.e. Leq, LMax, LMin, L10, L50, and L90.

METHODOLOGY

Selection of Sampling Locations

The Sampling locations were determined in the field using the expert judgment. Potential receptors sampled included, the neighbouring residences, schools, health centers Trading Centers and churches within the project vicinity. Figure 1-1 indicates some of the measured points along the proposed roads, and analytical results were summarized in Table 4-1 and 5-1 below.

Figure 3: **showing the four different sampling points**

Gas Measurements

Equipment Description: An IBRID MX6 Multigas Monitor (gaseous emissions measuring device) was used to carry out the assessment. The device consists of sensor openings with filters beneath to detect any gaseous emissions (control unit) and a LCD unit. The LCD unit displays readings detected by the machine. The device is both calibrated under the observation of a DIN EN ISO 9001:2015 certified quality assurance system in United Kingdom, for which a calibration certificate was issued.

Set-up and Measurement: The equipment was powered on and left in measuring mode for the first two minutes to allow zeroing and self-calibration. This was followed by ten minutes of measurement to allow digital readings to stabilize before they could be recorded.

Particulate Matter Measurement

Equipment Description: Particulate matter measurements were undertaken using a calibrated CEM DT-9881. The equipment uses a light scattering technique to sensors to determine the concentration of airborne particles and dust in the size range from about 0.3 microns (1 micron = 10-6 metre) to about 10 microns in diameter. Above 10 microns, all particles are sized as 10 microns, air temperature range of

00°C to 500°C (32 F- 122 F) and Relative humidity range of 0 – 100%RH. The equipment is designed with one second time resolution that allows it to be used to identify high pollution of particulate dust.
Set-up and Measurement: The equipment was placed on a tripod stand (1.2 m high) and allowed for two minute for zeroing down and the pump was run for 10 minutes to let in a cubic meter of ambient air. The values for PM10, PM2.5 and PM1.0 were read from the screen and recorded.

Noise Levels

Background noise levels (daytime) were measured through instantaneous spot measurements using a Center™ Data Logger Sound Level Meter set at 30-130 dB (A) range. The meter was mounted on a stand with each spot measurement lasting approximately 10 minutes. For each sampling interval, existing noise sources at the time of measurement were noted. Sound level data was then downloaded and analysed to determine noise levels according to the following parameters:

1. LEQ – the equivalent continuous noise level, which would provide the same energy as the intermittent, fluctuating noise levels.
2. L90 – the dB(A) level exceeded for 90% of the time. This provides an indication of quieter noise levels, or the background noise.
3. L50 – the dB(A) level exceeded for 50% of the time. This provides an indication of the median value noise levels.
4. L10 – the dB(A) level exceeded for 10% of the time. This provides an indication of the noisier sounds.

Equipment and Noise Assessment Methodology

Measurement of noise levels at selected areas was conducted to characterize noise levels along the proposed project routes. Center® Data Logger Sound Level Meter was used to carry out instantaneous spot measurements. The meter is equipped with the three frequency-weighing networks (A, B and C) that are used to estimate the response characteristic of the ear at various sound levels and frequency distribution of noise over the audible spectrum.

The noise assessment took into account daytime noise levels in view that all the proposed project activities will be carried out during day time hours and it's likely to affect the surrounding and neighbouring residences. A total of 37 measurement locations were selected including nearby residences, commercial areas, trading centers, hospitals, churches and schools. Measurements were carried out with a Center® 322 Data Logger Sound Level Meter (Type 2), set to 30-130 dB(A) range. Spot measurements lasting 10 minutes were undertaken at each of the 37 measurement locations, with locations recorded using a handheld GPS receiver. The assessment also noted the dominant noise sources at the time of measurement.

Before undertaking the measurements, Center® Data Logger Sound Level Meter was calibrated to ensure the accuracy of the data collected. The noise logger was then adjusted to the settings as shown on the Table 2-1:

Table 0-4: Noise Logger Settings

Meter	Center® 322 Data Logger Sound Level Meter
Type	Type 2
Frequency weighting	dB(A)
Range	30-130
Interval speed	Fast

No. of measurements	12
Time for each measurement	20 minutes

On completion of the site assessment, recorded data from the sound level meter was downloaded and analysed using proprietary (Testlink®) software and MS Excel.
The recorded data was analysed to determine the following parameters:

- LEQ
- L90
- L50
- L10
- LMax
- LMin

Noise assessment methodology

A Center™ Data Logger Sound Level Meter was used to carry out instantaneous spot measurements. The meter is equipped with the three frequency-weighing networks (A, B and C) that estimate the response characteristic of the ear at various sound levels and frequency distribution of noise over the audible spectrum. Before undertaking the measurements, the sound level meter was calibrated to ensure accuracy of the data collected.
Sampling locations were determined in the field using the expert judgement. Potential receptors sampled included, the neighbouring residences, recreational, commercial, business, agricultural, or a school, hospital, day-care center, trading center, or church schools and Trading Centres within the project vicinity. Instantaneous spot measurements were undertaken at selected points with the Data Logger Sound Level Meter set at 30-130 dB (A) range. Recording of each measurement lasted approximately ten minutes. During this period, the nature and type of existing noise sources at the measurement point were noted. The recorded data was then downloaded and analysed to determine LEQ, L90, L50, L10, LMin and LMax.

Meteorological conditions during study

During day-time noise measurement, dry sunny and cloudy conditions were encountered in the morning hours. In the afternoon, the weather was characterised by sunny and clear sky.

Ground conditions during study

The existing road surfaces are made up of murram. And most of the surrounding area was characterised with vegetation cover comprised of trees, shrubs and grasses.

Quality assurance and quality control

Minimizing interference

- "Free-field" noise measurements i.e. levels where influence of reflections is minimized were made and measurement carried out at least 5 metres from any reflecting structure other than the ground. The noise meter was placed on a tripod of height 1.2 metres above ground to avoid human body interference typically associated with measuring when the meter is held in hand.

- In all cases, measurements were taken at dwellings considered to be noise sensitive locations (NSL) and generally the boundary of the NSL (e.g. homestead, residential, recreational, commercial, business, agricultural, or a school, hospital, day-care center, trading center, or church) was taken as the most useful baseline measurement position. This aimed to avoid complaints and a bench mark for future monitoring when project activities commences.

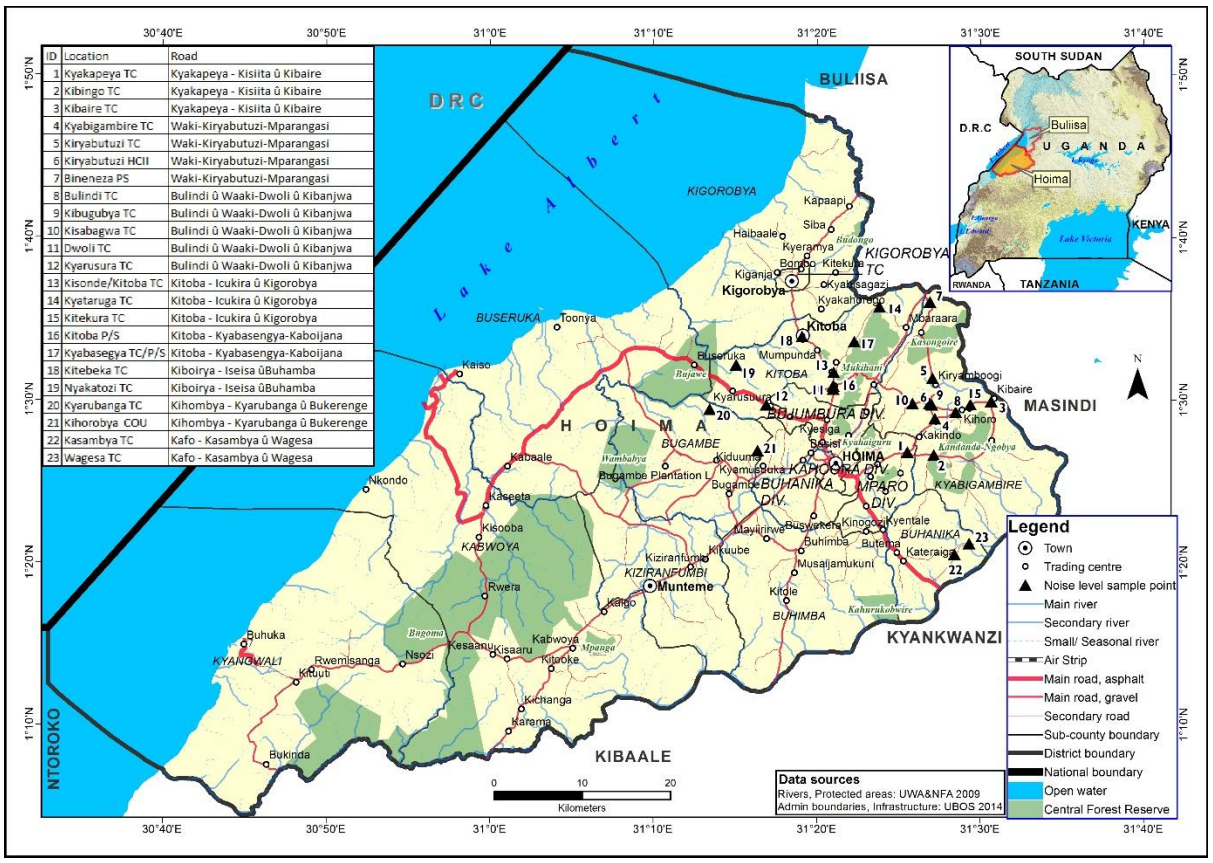
Data analysis

At the end of day data was downloaded from the loggers and analysed to determine the following parameters: duration, LEQ, LMin, LMax, L90, L50 and L10 is represented on the sample tables on figure 4-8 to 4-9 below. All information during the measurement phase was recorded: point coordinates, vehicle

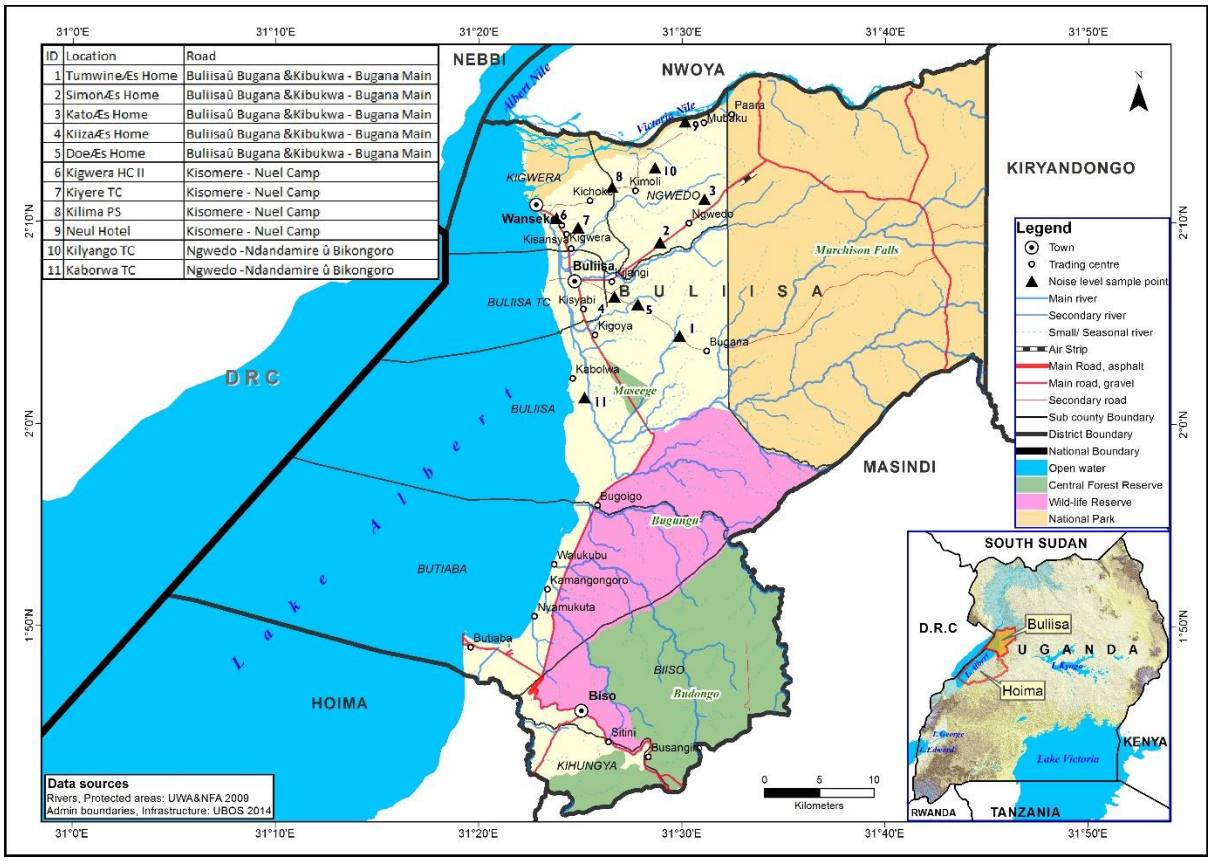
traffic, human activity and running engines, and background noise. All measurements were taken during the day.

Physical location

Albertine Region Sustainable Development Project (ARSDP) is located in Buliisa and Hoima Districts at spatial coordinated of 01 24N, 31 18E and 02 11N, 31 24E. (WGS 84 UTM Zone 36N) see Figure 1-1.



Map of Hoima District Showing sampled locations



Map of Buliisa District Showing sampled locations

FINDINGS and discussions

Ambient Air Quality

Below is a summary for baseline air quality and compared with NEMA Draft Air Quality Standards, WHO Air Quality Guidelines and IFC Standards. The baseline air quality results indicate a relatively pristine environment, currently devoid of industrial sources of air pollution.

Table 0-5: **Ambient Air emission measurements along the project sites in Buliisa Site**

Name of Site	O_2 (%)	CO (ppm)	CO_2 (%)	SO_2 (ppm)	H_2S (µg/m^3)	LEL (%)	NO_2 (ppm)
NEMA (Draft Air Quality Standard for Ambient Air)	**19.5-23.5**	**9.0**	**0.0009% (9.0 ppm)**	**0.15**	**15**	**25**	0.10
Tumwine's Home	21.0	0.00	0.00	0.00	0.00	0	0.00
Simon's Home	20.9	0.00	0.00	0.00	0.00	0	0.00
Kato's Home	21.0	0.00	0.00	0.00	0.00	0	0.00
Kiiza's Home	21.1	0.00	0.00	0.00	0.00	0	0.00
Babiha's Home	20.9	0.00	0.00	0.00	0.00	0	0.00
Deo's Home	20.9	0.00	0.00	0.00	0.00	0	0.00
Nyapeya Trading Center	21.0	0.02	0.04	0.00	0.00	0	0.00
Kiyere Health Center II	21.1	0.00	0.00	0.00	0.00	0	0.00
Kiyere Trading Center	20.9	0.01	0.00	0.00	0.00	0	0.00
Kilima Primary School	20.9	0.00	0.00	0.00	0.00	0	0.00
Kilyango Trading Center	20.9	0.00	0.00	0.00	0.00	0	0.00
Port bell Trading Center	21.0	0.00	0.00	0.00	0.00	0	0.00
Kigoya Trading Center	21.1	0.00	1.02	0.00	0.00	0	0.00
Sogolesh Trading Center	20.6	0.04	0.00	0.00	0.00	0	0.00

[1'] – Draft National Air Quality Standards, 2006

Table 0-6: **Ambient Air emission measurements along the project sites in Hoima District**

Name of Site	O_2 (%)	CO (ppm)	CO_2 (%)	SO_2 (ppm)	H_2S (µg/m^3)	LEL (%)	NO_2 (ppm)
NEMA (Draft Air Quality Standard for Ambient Air)	**19.5-23.5**	**9.0**	**0.0009% (9.0 ppm)**	**0.15**	**15**	**25**	0.10
Kyakapeya Trading Center	21.0	0.00	0.00	0.00	0.04	0	0.00
Kibingo Muslim Primary School	20.9	0.00	0.00	0.00	0.00	0	0.00
Kibaire Primary School	21.0	0.00	0.00	0.00	0.00	0	0.00
Kiryabutuzi Trading Center	21.1	0.00	0.00	0.00	0.00	0	0.00
Kyabigambire Trading Center	20.9	0.00	0.00	0.01	0.00	0	0.00
Kiryabutuzi Health Center II	20.9	0.00	0.00	0.00	0.00	0	0.00
Bineneza Primary School	21.0	0.02	0.04	0.00	0.00	0	0.00
Dwoli Primary School	21.1	0.00	0.00	0.00	0.00	0	0.00
Kibungubya Trading Center	20.9	0.01	0.00	0.00	0.00	0	0.00
Kisabagwa Primary School	20.9	0.00	0.00	0.00	0.00	0	0.00
Nakulabye Trading Center	20.9	0.00	0.00	0.00	0.00	0	0.00
Kibajwa Trading Center	21.0	0.00	0.00	0.00	0.00	0	0.00
Kitoba Trading Center	21.1	0.00	1.02	0.00	0.00	0	0.00
Kyataruga Trading Center	20.9	0.01	0.00	0.00	0.00	0	0.00
Kitekura Trading Center	20.9	0.00	0.00	0.00	0.00	0	0.00
Kitoba Primary School	20.9	0.00	0.00	0.00	0.00	0	0.00
Kyabasegya Primary School	21.0	0.00	0.00	0.00	0.00	0	0.00
Buhamba Trading Center	20.9	0.00	0.00	0.00	0.00	0	0.00
Nyakatozi Trading Center	20.9	0.00	0.00	0.00	0.00	0	0.00
Kyarubanga Trading Center	20.9	0.00	0.00	0.00	0.00	0	0.00
Kihombya Trading Center	21.0	0.00	0.00	0.00	0.00	0	0.00
Wagesa Trading Center	20.6	0.02	0.00	0.00	0.00	0	0.00

[1'] – Draft National Air Quality Standards, 2006

Table 0-7: **Particulate Matter Results for project routes in Buliisa District**

Location	$PM_{10.0}$	$PM_{2.5}$	Temp (^0C)	RH (%)
IFC, 2007 Standard	**50 µg/m³**	**25 µg/m³**		100
WHO Air Quality Guidelines (AQG), 2005	**50 µg/m³**	**25 µg/m³**		
Tumwine's Home	0.023	0.301	31.6	61.5
Simon's Home	2.014	0.270	34.2	47.9
Kato's Home	27.027	2.577	34.2	47.8
Kiiza's Home	3.014	3.533	32.5	53.9
Babiha's Home	20.409	2.949	35.7	56.1
Deo's Home	20.000	2.732	32.7	55.5
Nyapeya Trading Center	29.411	2.610	26.7	74.7
Kiyere Health Center II	32.420	4.901	28.6	66.7
Kiyere Trading Center	14.285	4.524	26.7	70.4
Kilima Primary School	9.523	4.926	27.3	71.7
Kilyango Trading Center	7.689	5.000	32.1	54.1
Port bell Trading Center	24.390	6.060	33.2	49.1
Kigoya Trading Center	10.638	1.661	30.1	62.6
Sogolesh Trading Center	10.869	2.079	28.9	69.6
IFC general EHS guidelines recommend that emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines (2007).				

Table 0-8: **Particulate Matter Results for project routes in Hoima District**

Location	$PM_{10.0}$	$PM_{2.5}$	Temp (^0C)	RH (%)
IFC, 2007 Standard	**50 µg/m³**	**25 µg/m³**		100
WHO Air Quality Guidelines (AQG), 2005	**50 µg/m³**	**25 µg/m³**		
Kyakapeya Trading Center	6.172	0.693	23.2	83.4
Kibingo Muslim Primary School	15.873	1.607	25.0	77.2
Kibaire Primary School	19.607	2.044	27.7	70.8
Kiryabutuzi Trading Center	5.347	0.754	28.7	64.0
Kyabigambire Trading Center	30.303	2.277	28.8	66.6
Kiryabutuzi Health Center II	33.333	2.433	30.8	61.1
Bineneza Primary School	24.390	2.257	28.2	69.5
Dwoli Primary School	14.285	2.178	29.2	61.8
Kibungubya Trading Center	9.523	1.492	29.9	58.1
Kisabagwa Primary School	38.461	2.680	29.0	59.8
Nakulabye Trading Center	28.571	2.597	27.8	60.9
Kibajwa Trading Center	27.777	2.724	28.3	57.3
Kitoba Trading Center	25.000	2.155	29.2	62.7
Kyataruga Trading Center	24.390	2.105	32.4	48.5
Kitekura Trading Center	20.408	2.087	32.1	49.5
Kitoba Primary School	5.405	1.016	33.3	46.4
Kyabasegya Primary School	29.411	2.538	34.7	42.8
Buhamba Trading Center	24.390	1.158	32.2	55.7
Nyakatozi Trading Center	13.333	1.785	33.1	52.9
Kyarubanga Trading Center	21.276	1.941	28.7	65.1
Kihombya Trading Center	18.181	2.016	33.5	42.3
Kasambya Trading Center	13.698	1.594	43.6	32.7
Wagesa Trading Center	6.802	1.390	33.7	38.8
IFC general EHS guidelines recommend that emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines (2007).				

Noise Levels

CONTEXT OF NOISE RESULTS

C**omparisons below provide perspective of foregoing noise results:**

Natural background noise levels are typically below 45 decibels (dBA), Normal human conversation is 65 dBA, and wind noise from an open automobile window at 65 mph will range from 80 to 85 dBA. 60 dBA and 85 dBA limits correspond to the Maximum Permissible Noise Levels for land use zoning of

“Residential + Industry or small-scale production + commerce” and the (Continuous or intermittent noise) from a Factory or Workshop respectively. Above 85 dBA Uganda’s national standards require use of hearing protection since relatively short-term exposures can have both short-term (acute) and long-term (chronic) harm on hearing. Exposure to noise levels above 100 dBA can result in permanent nerve damage and hearing loss.

The baseline noise level assessment done at sensitive receptors or locations on different roads for both Buliisa and Hoima districts included, Tumwine’s Home, Simon’s Home, Kato’s Home, Kiiza’s Home, Babiha’s Home, Deo’s Home, Nyapeya Trading Center, Kiyere Health Center II, Kiyere Trading Center, Kilima Primary School, Kilyango Trading Center, Port bell Trading Center, Kigoya Trading Center and Sogolesh Trading Center , Bineneza Primary School, Dwoli Primary School, Kibungubya Trading Center, Kisabagwa Primary School, Nakulabye Trading Center, Kibajwa Trading Center Kitoba Trading Center, Kyataruga Trading Center, Kitekura Trading Center, Kitoba Primary School, Kyabasegya Primary School, Buhamba Trading Center, Nyakatozi Trading Center, Kyarubanga Trading Center, Kihombya Trading Center and Wagesa Trading Center were higher than the permissible noise limits as prescribed in the in the National Environment (Noise Standards and Control) Regulations, 2003, for the General Environment (45 dBA). This can be attributed to the blowing wind, birds, children playing, insects (crickets), background noise from people and occasional noise from moving vehicles. Details of background noise measurements in form of LEQ, LMin, LMax, L90, L50, and L10 within the vicinity of the project components are presented in Table 4-8 and 4-9 below:

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Table 0-9: Noise levels at selected points- Day time for all the roads in Hoima District

	Kyakapeya T/C	3125329	0126445	8:50	9:00	60	81.1	73.3	81.1	81.6	80.2	84.2	Moving cars, People talking	High noise level on car engines
	Kibingo Trading Center	3127363	0122632	9:40	9:50	60	70.1	66.5	67	75.1	66	86.2	Moving Cycles and Music	Noise level was high when different bars played music
	Kibaire Trading Center	3130463	0129124	10:45	10:55	60	73.8	73.3	74	74.1	72.9	86.4	People talking and Wind blowing	High noise level when people were shouting
	Kiryabutuzi Trading Center	3127116	0128485	11:30	11:40	60	64.1	60	60.2	61	57.9	89.7	People talking and Cars Moving	Major noise from Car Movements
	Kyabigambire Trading Center	3126534	0129426	12:15	12:25	60	46.8	40	41	50.3	37.3	67.6	Moving Motor Cycles and noise from people	Increased noise level when there is frequent motor cycles moving
	Kiryabutuzi Heath Center 11	3127073	0131126	13:30	13:40	50	58.4	55.2	58	61	53.8	69	Moving Motor Cycles and wind blowing	High noise level when there was strong winds
	Bineneza Primary School	3127030	0135524	13:55	14:05	50	59.2	56.2	58	59.2	54.3	79.5	Kids playing during lunch break	High noise level when pupils were playing
	Bulindi Trading Center	3128320	0129167	14:45	14:55	60	55.1	52.9	54.7	56.6	51.3	63.5	Milling Machine, Cars Moving	High noise level when milling machine is running
	Kibugubya Trading Center	3125545	0129450	15:05	15:15	60	83.5	81.6	82.2	84.1	80.9	94.5	Cinema holes	High noise level when music was playing in the cinema hall
	Kisabagwa Trading Center	3124279	0130386	15:15	15:25	60	90.6	74.1	75.7	95.3	67.7	97.6	People talking and Cars Moving	Increased noise level was associated to moving cars
	Dwoli T/C	3121002	0130512	16:30	15:40	60	77.6	76.3	76.8	79.1	75.8	86.1	Birds and Wind blowing	Short time strong winds
	Kyarusura Trading Center	3116550	0129425	17:20	17:30	60	77.6	76.3	76.8	79.1	75.8	86.1	Cars Moving and People talking	Increased noise level was associated to moving cars
	Kisonde/Kitoba T/C	3121311	0131558	10:50	11:00	60	81.1	73.3	81.1	81.6	80.2	84.2	Moving cars, People talking	High noise level on car engines

	Kyataruga Trading Center	3120375	0134577	11:40	11:50	60	70.1	66.5	67	75.1	66	86.2	People talking and cinema holes	Noise level was high at cinema hall
	Kitekura Trading Center	3130463	0129124	12:25	12:35	60	73.8	73.3	74	74.1	72.9	86.4	People talking and Wind blowing	High noise level when people were shouting
	Kitoba P/S	3121062	0131255	13:30	13:40	50	64.1	60	60.2	61	57.9	89.7	Cars motor cycles	Noise from motor cycle engines
	Kyabasegya T/C	3122120	0133264	14:05	14:15	63	48.4	42	43	52.1	36.7	77.8	Moving Motor Cycles and noise from people	Increased noise level from motor cycle engines
	Kitebeka Trading Center	3114599	0133549	15:05	15:15	60	46.8	40	41	50.3	37.3	67.6	Moving cars	Increased noise level when there is frequent motor car movements
	Nyakatozi Trading Center	3114599	0132097	15:50	16:00	60	58.4	55.2	58	61	53.8	69	Moving Motor Cycles	Noise level when there is frequent motor cycle movements
	Kyarubanga T/C	3113296	0129000	10:05	10:15	60	58.4	55.2	58	61	53.8	69	Moving Motor Cycles and people talking	Noise level from motor cycles
	Kihorobya COU	3114516	0127017	11:55	11:05	50	59.2	56.2	58	59.2	54.3	79.5	Birds	High noise level from Birds
	Kasambya T/C	3127296	0119128	12:45	12:55	60	59.2	56.2	58	59.2	54.3	79.5	Kids playing	High noise level when kids were playing
	Wagesa T/C	3126534	0129426	12:40	12:50	60	46.8	41	41	50.3	35.3	67.6	Moving Motor Cycles and noise from kids playing	Increased noise level when there is frequent motor cycles moving

Applicable noise Limits are as prescribed for the General Environment in the National Environment (Noise Standards and Control) Regulations, 2003

Values highlighted in bold indicate noise in excess of permissible limits

Table 0-10: Noise level measurement at selected points- Day time for all the roads in Buliisa District

	Tumwine's Home	3127520	0205528	11:00	11:10	50	47.4	34.3	46.8	65.6	28.1	66.2	Birds, People talking	High noise level from kids playing
	Simon's Home	3127499	0205563	11:30	11:40	50	88.2	72.2	80.2	108.2	71.9	109	People talking	High noise level from kids playing
	Kato's Home	3127444	0206221	12:15	12:25	50	52.1	40.8	45.9	66.4	40.2	70.8	People talking and Wind blowing	High noise level when people were shouting
	Kiiza's Home	3127495	0206288	12:50	13:00	50	74.6	73.4	102.2	108.4	72.1	111.4	People talking, Dog baking	Major noise from Dog baking
	Doe's Home	3129483	0204217	13:30	13:40	50	70.4	47.2	70.6	97.8	46.6	103.2	Moving Motor Cycles and wind blowing	High noise level when there was strong winds
	Kigwera Health Center II	3123552	0210103	9:55	10:05	50	59.2	56.2	58	59.2	54.3	79.5	Kids playing during lunch break	High noise level when pupils were playing
	Kiyere Trading Center	3124174	0210030	10:45	10:55	60	99.7	75.4	103.3	112.5	74.3	112.9	Milling Machine, Cars Moving	High noise level when milling machine is running
	Kilima P/S	3124497	0209411	11:15	11:25	50	83.5	81.6	82.2	84.1	80.9	94.5	Cinema holes	High noise level when music was playing in the cinema hall
	Neul Hotel	3130119	0214504	13:15	13:25	55	85.5	73.2	80.2	103.2	71.6	112.3	People talking and Cars Moving	Increased noise level was associated to moving cars
	Kilyango T/C I	3130104	0214241	14:40	14:50	60	75.5	71.1	70.2	101.2	70.4	100.2	Birds and Wind blowing	Short time strong winds
	Kilyango T/C II	3129509	0230900	15:30	15:40	60	77.6	76.3	76.8	79.1	75.8	86.1	Cars Moving and People talking	Increased noise level was associated to moving cars
	Kaborwa T/C	3125115	0200582	16:30	16:40	60	81.1	73.3	81.1	81.6	80.2	84.2	Moving cars, People talking	High noise level on car engines

Applicable noise Limits are as prescribed for the General Environment in the National Environment (Noise Standards and Control) Regulations, 2003

Values highlighted in bold indicate noise in excess of permissible limits

Higher noise levels (above 45 dBA) were recorded at the proposed Kiyera Trading Centre, Nuel Camp, Kilyango and Trading Centre in comparison to the National Environment (Noise Standards and Control) Regulations, 2003 with a range of 28.1 to 112.9 dBA. High noise levels were mainly attributed to sounds from flowing water along Albertine Nile and strong wind at the time of assessment.

Kiiza and Simon residences recorded noise levels above the permissible limit of 50 dBA for a residential area as prescribed in the National Environment (Noise Standards and Control) Regulations, 2003 ranging from 100.2 to 111.4 dBA. Local legislation is more stringent than IFC which put the permissible limit at 55 dBA. High noise levels were attributed to the people talking within the sampling area and hissing sound from baking dogs.

The baseline ambient air quality results indicate a relatively pristine environment, currently devoid of industrial sources of air pollution. The levels for CO were 0.00-0.04 ppm, SO_2 were 0.00–0.01, H_2S were 0.00-0.04, LEL were 0, NO_2 were 0 and CO_2 were 0.00-1.02. In general, most of the levels were below detectable levels ie (H_2S is 15Ng SO2 is 0.15ppm /m^3, CO is 9.0ppm, NO_2 is 0.10ppm and CO_2 is 9.0ppm) and within the IFC and WHO recommended standard and NEMA (Draft Air Quality Standard for Ambient Air).

Conclusions

Day time noise measurements in thirty seven measured points were higher than the permissible noise limits as prescribed in the in the National Environment (Noise Standards and Control) Regulations, 2003, for the General Environment (45 dBA). This can be attributed to the blowing wind, birds, children playing, insects (crickets), background noise from people and occasional noise from moving vehicles.

And the baseline air quality results indicate a relatively pristine environment, currently devoid of industrial sources of air pollution. Measurements at all points along the proposed roads were below detectable levels and within the IFC and WHO recommended standard and NEMA (Draft Air Quality Standard for Ambient Air).

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APPENDIX 5.7: LIMNOLOGY AND WATER QUALITY BASELINE ANALYSES

Limnology report of the survey carried out in Buliisa district under the Albertine Region Sustainable Development Project (ARSDP) of the Ministry of Lands, Housing and Urban Development

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September, 2017.

1.0 Introduction

Globally, roads are known for its significant role in ushering economic transformation. Good roads contribute to social and economic growth as well as to the development of the environmental. According to World Bank (2011), roads have a direct impact on communities and the natural environment. The associated benefits may include improved access to natural resources and easy movements of goods and people to markets and work. Although these benefits are largely social and economic in nature, at times the environmental benefits are understated (Burnet, 2001).

Regardless of where it is, any road project may have impacts that are environmentally significant for which proper management is required (World Bank, 2011). This is important because of the critical need to ensure that these roads do not negatively impact on the existing ecosystems. Along these project roads are various biotic communities, diverse species habitats, and probably a pristine water quality conditions that should be conserved from degradation by external negative factors. That means that these roads should not become sources of pollution It is also important that these roads do not become sources of water pollution but rather a means by which the aquatic ecosystem remains conserved.

In Buliisa district three roads namely Ngwedo Bikongoro Ndandamire (10.7 Km), Buliisa Bugana (10.8 Km) and Kisiabi Kabolwa (9.8 Km) have been earmarked for improvement under the World Bank and Government of Uganda co-financed Albertine Region Sustainable Development Project (ARSDP). These proposed road projects traverse some drainage basins and floodplains. It is most likely that in the process of rehabilitating these roads, some magnitude of environmental modifications is most likely to occur. Typical modifications could involve alteration of the local hydrology, degradation of both the surface and underground water quality, increase in the siltation of basins and water sources due to soil erosion.

Additionally, there are also other impacts that could be triggered by such road projects Impacts such as the degradation of road side vegetation, loss of biota habitat, extinction of some rare species population, loss of biological diversity at species, population and genetic levels, fragmentation of existing habitats, increase in wildlife mortality due to road accidents as well as dispersal of invasive and alien wildlife species along the road project area.

Since these proposed road projects intersect with drainage systems at some points, it is also anticipated that pollution of the existing water sources could arise. Primarily, pollution due to storm water surface runoff, deposition of eroded soil materials, dumping of construction debris, spillages of diesel and oil, paint, and other harmful chemicals. These pollutants usually end up in the adjacent water bodies either through direct discharge by workers at the sites or via non-direct discharge by storm water runoff leading to physical, chemical and biological degradation of water quality. Under such circumstances, it becomes extremely necessary to identify appropriate mitigation measures to tackle both the likely short and long term detrimental effects on nature and wildlife.

Therefore, the aim of conducting a water quality assessment was to examine and establish baseline information on the quality of the existing water sources in Buliisa. This is important because future monitoring of the identified impacts of the road projects on the water quality, hydrology, waterway health and other beneficial uses and values would depend upon the data and information generated during the survey.

This report forms the basis upon which limnological data specifically on the physico-chemical status of the water sources will be depend. The identified gaps for which further research and monitoring is required are also proposed. Therefore, this is the first step by which data is assembled for future reference.

1.1 Location

Buliisa district is found within the Albertine graben lying between latitude 1°232 and 2°212 N and longitude 31°242 and 33°242 E.

1.2 Climate

The district receives a bimodally distributed rainfall with peaks in March to May and August to November (Harrop, 1960). The area also experiences drought twice in a year (between June to August and December

to February). The temperatures vary between 18 to 30 °C with the maximum monthly temperatures expected to reach up to 38.5 °C (Kajubi, 2013).

1.3 Geology

The soils in Buliisa district are yellowish red in color. According to Harrop, (1960) it is mixed with clay loam, and is precisely described as *ferralitic, ferrisol* and *hydromorphic* in nature.

1.4 Hydrology

Lake Albert in the west and Victoria Nile in the East are the main water bodies of the district. Apart from these, there are no major rivers (Kajubi, 2013) although a few seasonal and semi-permanent streams namely Sambye, Zolya and Waiga are present. The waters of these streams come from the rain events and run-off that makes them flood. These streams and flood plains often quickly drains into Lake Albert through a stretch of permanent and semi-permanent wetlands. The discharge in the channel then ceases (CPCS, 2014). The floodplains act as storage zones for runoff from the catchment transporting dissolved and particulate nutrients that support aquatic production.

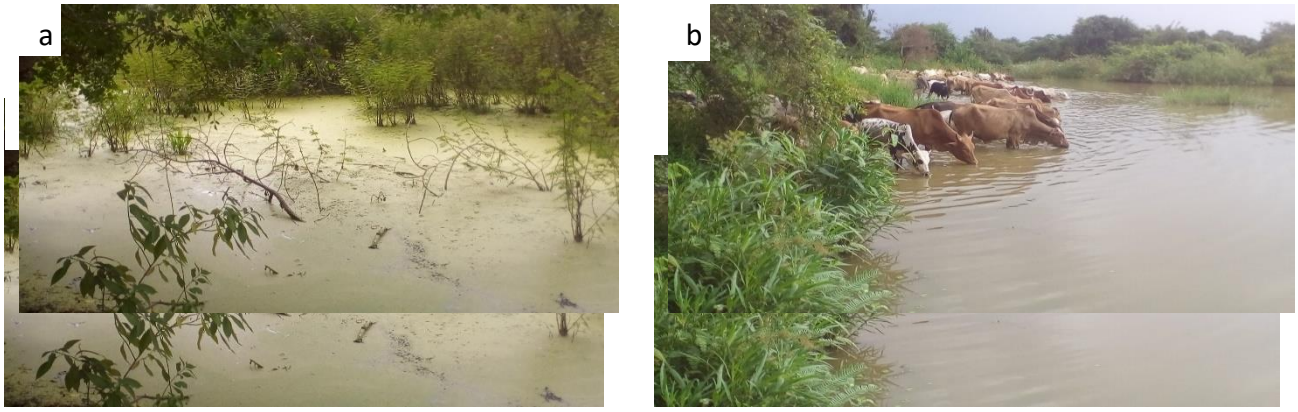


Plate 1: Seasonal flood plains that act as storage zones. Some are also used by animals.

There are also a few dug out wells commonly used by the local community during the drought period.

Plate 2: Underground community well. These provide water for domestic purposes

1.5 vegetation

Buliisa district lies within the tropical savannah. Perennial grasses, scattered trees and shrubs are commonly encountered. There are occasional water logged areas that are semi-permanent and are referred to as wet

savannah grassland (Byenkya *et al.*, 2014). These Swamp vegetation fills most of the water logged valleys (Langdale-Brown *et al*., 1964).

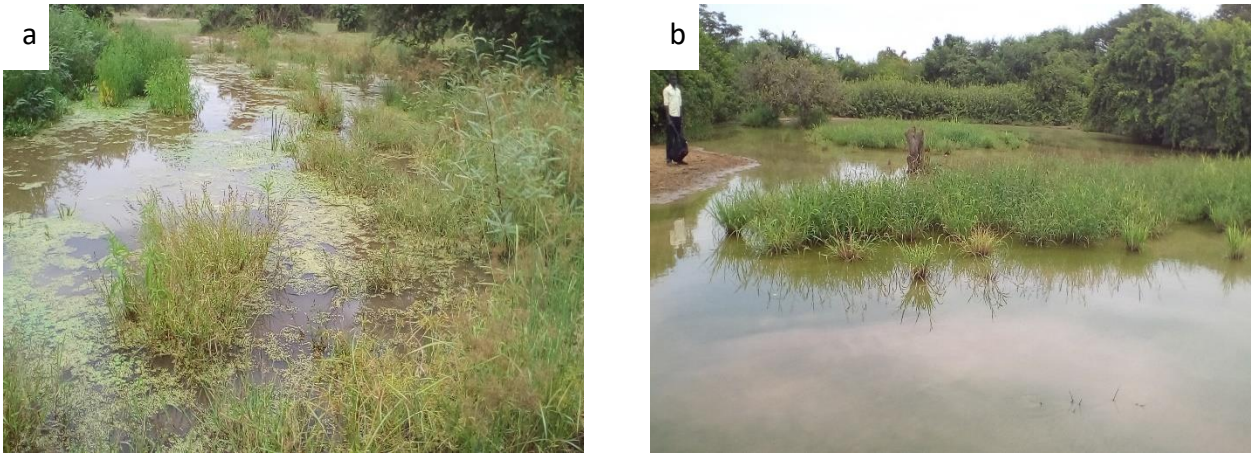


Plate 3: Seasonal wet savannah grassland (a) and one of the drainage basin

The streams and rivers are potentially rich in species diversity with high biological productivity. It is reported that at least 53 fish species are found here of which 10 are endemic (CPCS, 2014). The stream beds are characterized by sandy, muddy and rocky habitats. Such microhabitats are critical for many fish species that use them during breeding, nursery and feeding stages.

1.6 Economic activities

Crop farming, livestock production and fishing are commonly practiced.

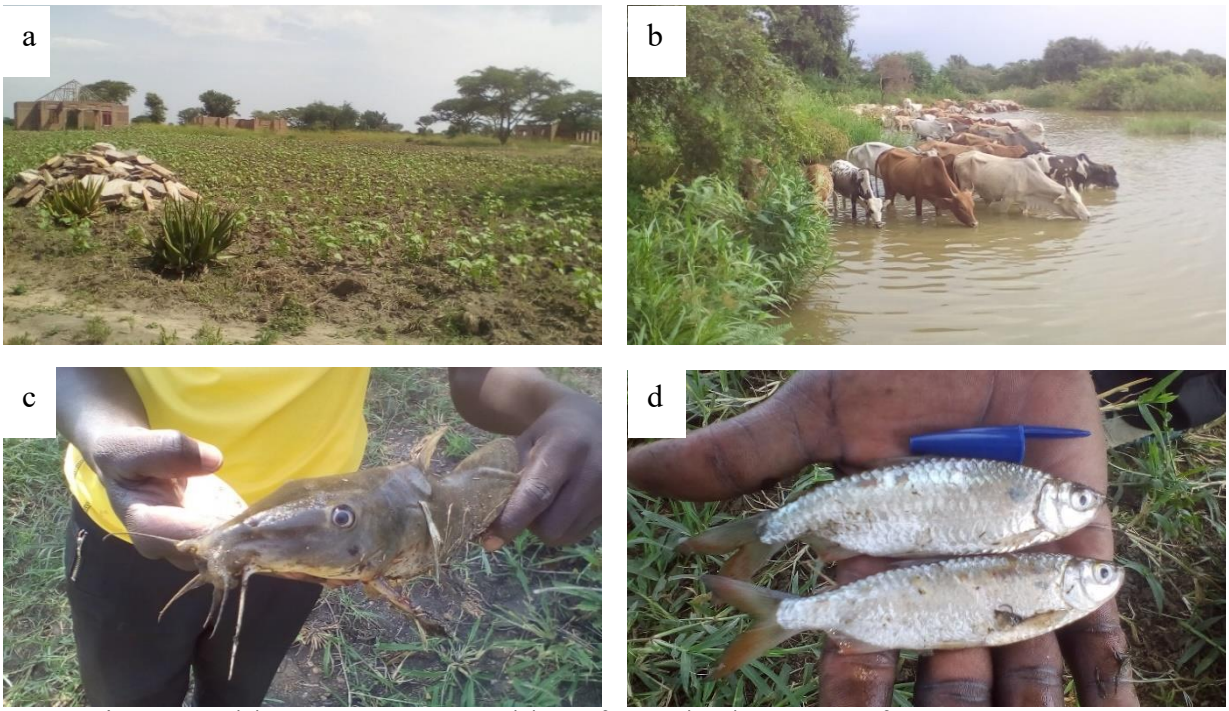


Plate 4: Farming (a) livestock production (b) and fishing (c, d) are some of the economic activities

1.7 Objectives:

- to generate baseline limnological data specifically on the physico-chemical status of the identified water sources that intersect the proposed project roads.
- To identify potential impacts of the proposed road project and propose mitigation measures.
- To recommend other areas of research

2.0 Materials and methodology used

Work commenced of the 14th of August 2017 and was scheduled to run for a period of eighteen days.

2.1 Study site

The proposed project roads (Buliisa Bugana (10.8 Km), Ngwedo Bikongoro Ndandamire (10.7 Km), and Kisiabi Kabolwa (9.8 Km) are crossed by a few drainage basins and flood plains that are occasionally flooded following surface runoffs. Site map showing the locations of the roads to be upgraded was obtained. From the map, streams that crosses the identified roads were first located and sample sites prior to ground trothing. In the field a GPS was used to mark the coordinates of the sampling points. Digital camera and note books were used to take field photographs and record other observed information.

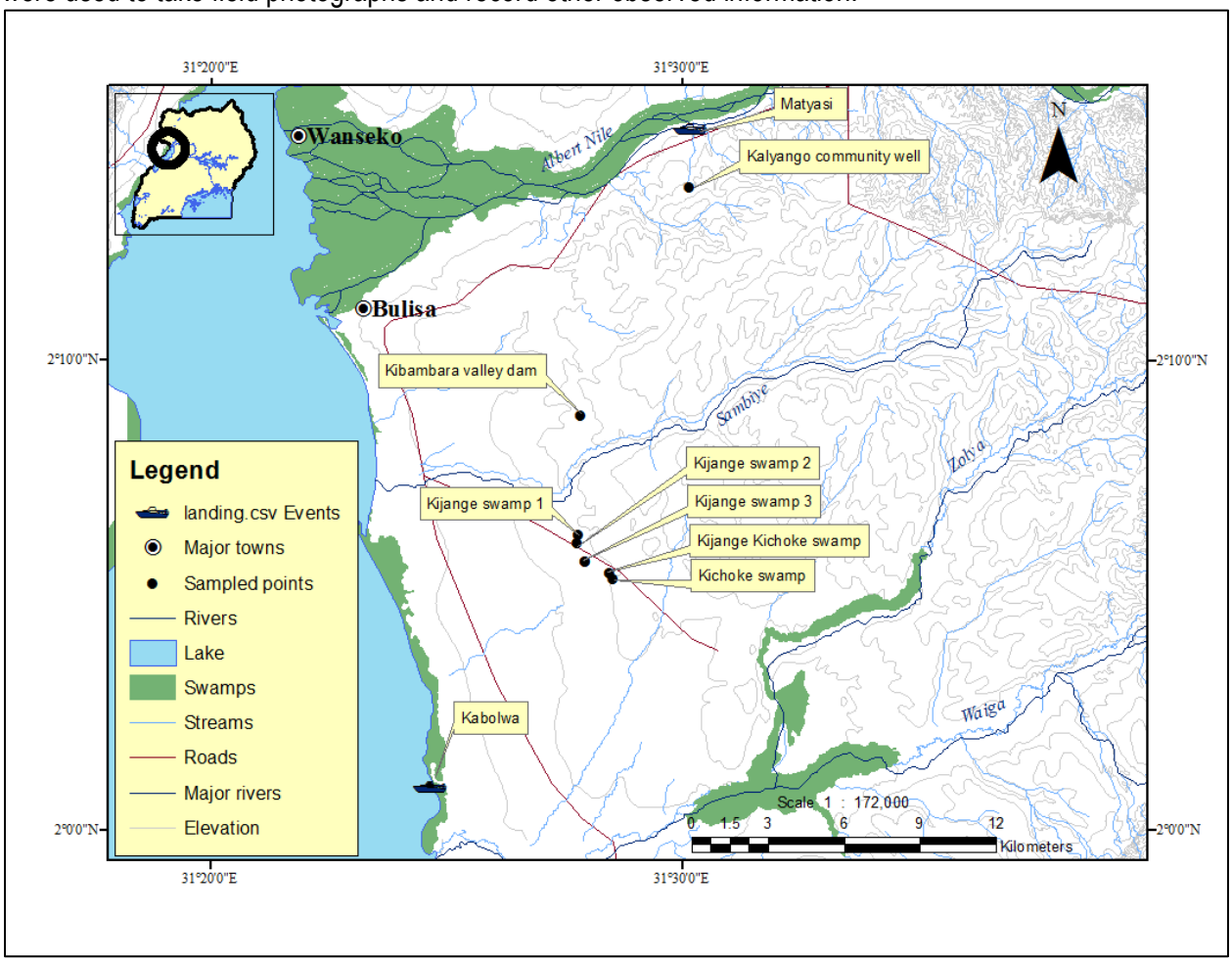


Figure 1 Location map of the sampled swamps and valley dams in Buliisa district

2.2 Data collection

In the field, *w*ater quality parameters like temperature, pH, total dissolved solids, electrical conductivity, dissolved oxygen and turbidity were measured *in-situ* using a multi-probe meter (HORIBA Model water quality meters). Water samples were collected from the same sites into clean 1 L plastic sample bottles and

immediately preserved and stored away from sunlight in ice box. From the field the samples were later stored in a fridge at 4 °C. Standard operating procedures according to ISO 5667-3 (Table 2) was followed. The water samples were then delivered to a certified laboratory at the National Water and Sewerage Corporation (NWSC) for further chemical analyses. The method used for water quality test are presented in Table 1.

Table 1 Water quality parameters, field test method and equipment used

Parameter	**Test unit**	**Method**	**Test equipment (Model)**
Temperature	°C	Multi probe meter	HORIBA water quality meter
Ph			
Turbidity	NTU		
Electrical conductivity	µS/cm		
Dissolved oxygen	mg/L		

Table 2 Sample handling conditions for the different determinants, according to **ISO 5667-3**

Determinant	**Material of sample container**	**Method of preservation**	**Maximum time between sample and analysis**
Ca,	P, acid washed	HNO_3 , pH 1-2	1 month
Anion (–NO_3- , NO_2, PO_4,	P or G	Cool to 1- 5°C or	24 h respectively, 1 month. Filter
Alkalinity	P or G	Cool to 1-5 °C	24h, 1 month
BOD	P or G	Cool to 1-5°C or freeze to -20	24 h, 1 month keep in the dark. Exclude air
Colour	P or G	Cool to 1	5 days, in dark.
Nitrogen, Ammonia	P or G	H_2SO_4 pH 1-2 and cooling 1-5 °C	21 days. filter on - site
Nitrogen nitrate	P or G	HCL, pH 1-2 or cool 1-5 °C or freeze at – 20 °C	7 days resp. 1 month
N, Kjeldahl and TN	P	H_2SO_4 pH 1-2 and cooling 1-5 °C	6 months in dark,
Odour	G		6 hours
Phosphorus, total	P/G/BG acid washed	H_2SO_4 pH 1-2 or freeze to -20 °C	6 months
Phosphorus dissolved	P/G/BG acid washed	Cool to 1-5oc or freeze to -20	1 month. filter on site
COD	P or G	Cool to 1 - 5°C or freeze -20 °C	24 h. resp. 6 month
Oil and grease	G solvent washed	H_2SO_4, HCL, pH 1- 2	1 month
Iron , total	P / BG acid washed	HNO_3 pH 1-2	1month
Dissolved oxygen	P or G	Fill container completely	Analyse as soon as possible , preferably on site

pH	P or G	Cool to 1-5, fill completely	6 h. Analyse as soon as possible , preferable on site
Solids TSS	P or G	Cool to 1-5 ^{o}C	2 days
Solids TDS	P or G	Cool to 1-5 ^{o}C	24 hours
Turbidity	P or G	Cool to 1-5 ^{o}C	24 hour in dark
Nitrogen, nitrite	P or G	Cool to 1-5 ^{o}C	2 days. preferably on - site

NB: P = plastic; G = Glass

Table 3 Water quality test methods and test units for chemical Laboratory analyses

No	Parameter	Unit	Method
1	Total Suspended Solids (TSS)	mg/L	Membrane filtration, APHA, 1995
2	Color (apparent)	Ptco	Spectrophotometric method, APHA, 1995
3	Total Alkalinity (TA)	mg/L as $CaCO_3$	Titration and Electrometric, APHA, 1995
4	Total Nitrogen (TN)	mg/L	Persulfate oxidation method, APHA, 1995
5	Total Phosphorus (TP)	mg/L	Persulfate oxidation method, APHA, 1995
6	Chemical Oxygen Demand (COD)	mg/L	$K_2Cr_2O_7$ Digestion, APHA, 1995
7	Biological Oxygen Demand (BOD_5)	mg/L	5-Day BOD test, APHA, 1995
10	Nitrate-Nitrogen (NO_3^--N)	mg/L	Spectrophotometric/ manual cadmium reduction method, APHA, 1995
11	Iron (Total)	mg/L	Direct Air Acetylene Flame method, APHA, 1995
12	Calcium	mg/L	Direct Air Acetylene Flame method, APHA, 1995
13	Fats, oil and grease	mg/L	Partition gravimetric method, APHA, 1995
14	Fecal coliform	Cfu/100ml	Fecal coliform test (Medium), APHA, 1995

The results obtained were also compared against the threshold values according to the national water and sewerage corporation drinking water guideline, NEMA, (1999) and USEPA, (2003) standards. Descriptive statistics of the data set are presented in Tables 2 and 3 for Hoima and Buliisa districts respectively. The data obtained were analyzed using SPSS 21. Mean values of the different physico-chemical (mean, SD and range) were computed.

3.0 Results

3.1 Temperature

The temperatures of the surface waters varied from 27.4 – 31.7 °C) indicating warmer waters (Table 4). The ambient temperature in Buliisa vary between 18 to 30 °C with the highest reaching up to 35 °C. Due to such very hot and relatively dry weather conditions it is probable that most of the seasonal water sources that are also shallow (depth < 1 m) do warm up easily because of the direct warming of the surface waters by the sun with a shallow column.

The location of Buliisa being on the lee ward side of the western rift valley could also contribute to the warming effect of these streams since the winds that blow here are less relatively drier. The survey also coincided with the mid-year short dry spell of June to August meaning that the weather was far warmer and less rains were being received. The seasonal swamps and pools of water are exposed to direct sunshine meaning that much of the solar heat energy is directly absorbed into the water column. The characteristic sandy soils with the overgrazed and bare ground and the stunted savannah vegetation means that many within the savannah receive direct overhead sunshine.

3.2 pH

A slightly alkaline condition was recorded across the sampled water sources with pH ranging between 7.3 to 9.5 (Table 4). The highest pH (moderately alkaline condition) was recorded in the lake (at Kabolwa landing site). This probably could be attributed to the high primary productivity by algae. High pH above the range is undesirable because it results into free ammonia becoming available in the water and this is dangerous to aquatic life (USEPA, 1999). The acidic pH condition (pH 5.8) was water samples from Kalyango community well. This acidic condition in the water may be attributed to the presence of humic acid in the soil since it is a dug out well. Both the highest and lowest pH were beyond the stated limits by NEMA (1999) and USEPA

(2003). Acidic waters pose harmful ecological effects on most aquatic life such as fish while non desirable species of planktons and mosses may begin to dominate.

Plate 5: underground dug out well commonly used during drought period

3.3 Electrical conductivity

Most of the water sources had very low EC (26 to 235 µS/cm) except for Kijange Kichoke (162 µS/cm) on Buliisa Bugana road and Kabolwa (235 µS/cm) on Lake Albert at the end of Kisiabi Kabolwa road where higher values were recorded (Table 4). The highest EC at Kabolwa may be attributed to the saline waters of the lake. This is expected as the lake is located within the rift valley and has a generally high EC. As for Kijange Kichoke the high EC may be attributed to the high algal bloom arising from heavy nutrient loading.

Plate 6: Kijange Kichoke pond 3 on Buliisa Bugana road, Note the high algal bloom

3.4 Dissolved oxygen

The concentrations of dissolved oxygen were generally high (4.3 – 11.7 mg/L) as shown in Table 4. This could be attributed to the presence of abundant submerged and rooted aquatic macrophytes together with the algal blooms which all contribute to the high productivity of these water source. The measured values of DO exceeded the stated limits of > 4 mg/L according to NEMA (1999) and USEPA, (2003). The presence of DO in such concentrations can support most aquatic lifeforms. Such luxuriant plant growth is supported by nu[illegible]

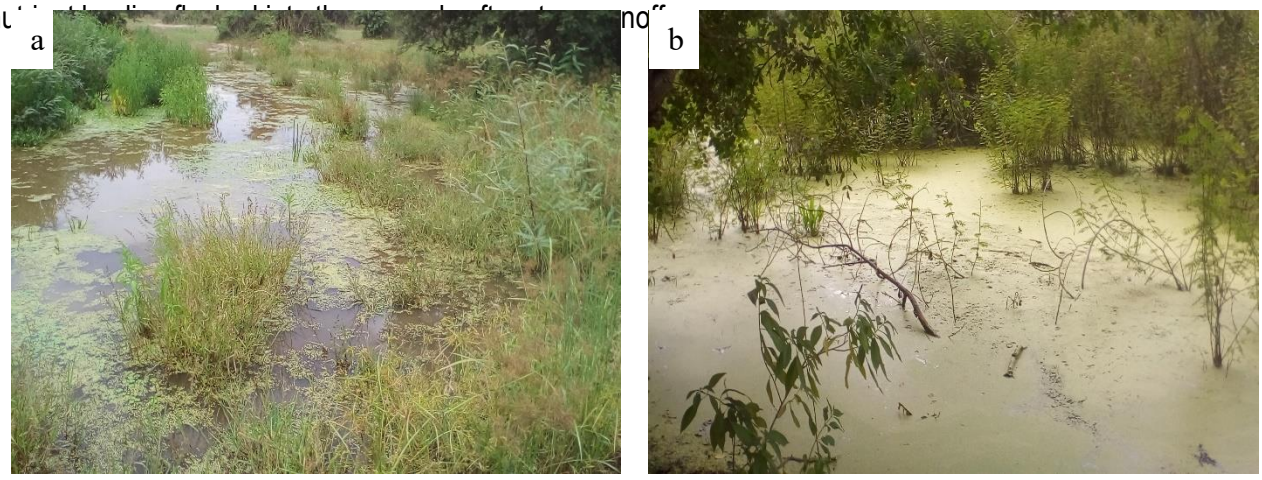


Plate 7: Dense aquatic macrophytes and algae at Kijange 1 and Kichoke along Buliisa Bugana road.

3.5 Total dissolved solids

The concentrations of total dissolved solids in the surface waters were generally low (15.8 to 173.5 mg/L) as observed across most of the sampled water sources (table 4). Higher TDS were recorded at Kijange Kichoke

and at Kabolwa landing sites respectively. TDS are due to particles that are dissolved in the water. It is also due to the presence of organic matter such as leaves, livestock wastes, silt and inorganic nutrients released from rocks. Storm water runoff from the nearby road surfaces and the overgrazed areas transports loose particles mixed with livestock wastes into these drainage basins after rain down pour. Moreover, most of these receiving valleys may not be directly connected to other drainages hence no outflows unless flooding occurs.

In Buliisa the terrain is gentle sloping with occasional drainage valleys and flood plains. The savannah grassland and shrubs form thickets in some areas. In between are paths and grazing grounds created by the livestock. The trampled soils along these paths with the overgrazed grounds enhances surface runoff. At Kabolwa the high TDS may be due to the saline nature of lake Albert.

Aquatic organisms require some amount of minerals to survive. However, extremely high or low TDS can limit growth of many of these organisms or even cause their deaths. High TDS can lead to toxic condition through the increase in salinity and hence cause changes in the ionic composition of the affected water. Increase in salinity in turn triggers of a number of changes such as causing shifts in the biotic communities, limit biodiversity or even exclude the less tolerant species such as rotifers as well as exert chronic effect at specific life stages of the aquatic organisms (Phyllis *et al*, 2007). High TDS is also responsible for reducing water clarity. When this occurs it will result in a decrease in photosynthesis or an increase in the temperature of the surface water. Many aquatic organisms cannot survive in high temperatures.

3.6 Turbidity

In Buliisa, the water samples showed some level of turbidity (24.5 to 346.5 NTU) that were high in some cases above the stated limits by NEMA (1999) and USEPA (2003) as shown in Table 4. Highly turbid water sources are unaesthetic and are capable of harming fish and any other aquatic life. This may occur through reducing food supplies, affecting gill function, hampering growth rate, lowering resistance to disease, modifying natural movements and migrations of aquatic organisms and also preventing successful development of fish eggs and larvae (Minesota Pollution Control Agency, 2008).

The observed high turbidities could be attributed to the presence of suspended and dissolved particles in the water much of which come through the storm water surface run-off from the roads and the overgrazed grounds. Particles from clay and silt particles, organic and inorganic materials, soluble colored organic compounds, algae and other microscopic organisms are responsible causes (Minesota Pollution Control Agency, 2008).

The fact that these water sources are continually being used by cattle as drinking point enhances the turbidity level through trampling, stirring and suspending the deposited bottom sediment. The shrub like thickets have open ground that allow for easy drainage of the storm water. This results into more of the exposed and loose soils being washed down into the drainage basins as shown in the plate 4 below.

a

b

long o)

Table 4 Summary of the environmental (physical) conditions (mean values) at the various sampled points in Buliisa District

No	Road	Distance (Km)	Stream	Northing (UTM)	Easting (UTM)	Temp (°C)	pH	EC (µS/cm)	DO (mg/L)	TDS (mg/L)	Turbidity (NTU)
1	Buliisa Bugana	10.8	Kijange 1	329102	232709	29.8	7.5	26.0	8.6	15.8	
			Kijange 2	329059	232388	26.3	7.7	82.0	5.8	52.0	282.3
			Kijange 3	329380	231680	25.1	7.3	35.8	11.7	22.8	
			Kijange Kachoke	330320	231243	25.9	7.9	162.0	10.6	103.0	
			Kichoke	330455	231012	27.4	8.4	72.8	10.8	44.0	346.5
2	Kisomera Kalyango Nuel	3.45	Kalyango	333490	246356	27.8	5.8	49.0	9.1	33.0	30.0
			Albert Nile Matyasi	333504	248630	28.4	7.6	68.3	8.5	45.0	24.5
3	Ngwedo Bikongoro Ndandamire	10.7	Kibambara valley dam	329211	237402	29.8	7.9	21.50	4.3	14.75	
4	Kisiabi Kabolwa	9.8	Kabolwa	323273	222830	31.7	9.6	235.0	7.7	173.5	68.9
Range (This study)						27.4 – 31.7	5.8 – 9.6	26.0 – 235.0	4.3 – 11.7	15.8 – 173.5	24.5 – 346.5
NEMA, 1999						20 - 35	6 - 8		>4	1200	100
USEPA, 2003						<30	6.5- 9		>4	100	<5

Table 5 Summary results of the physico-chemical conditions. Highlighted values are above the permissible limits

Parameter	KJP3	CWR	KIC	KVD	R.N.	KIJ Pond	KCK	KJPS	KJRP	USEPA, 2005	NWSC std	units
TSS	580	95	18	156	14	317	260	118	79		100	mg/L
Alkalinity: Total	116	12	24	16	36	60	88	20	36	>200	800	mg/L
Color (apparent)	7300	1016	284	1950	55	1092	999	283	319		500	PtCo
Nitrate	0.93	0.19	0.02	1.11	0.01	0.15	0.14	0.05	0.04	50	10	mg/L
BOD_5	33.1	3.24	1.86	7.98	0.96	6	15.6	7.26	5.76		50	mg/L
COD	127	10	22	16	16	48	71	36	13	20 - 30	100	mg/L
Calcium: as Ca^{2+}	6.4	0	3.2	0	3.2	6.4	6.4	1.6	3.2	130	-	mg/L
Iron: Total	0.012	1.109	0.519	0.71	0.014	0.11	0.07	0.155	0.413	0 – 0.5	10	mg/L
PO_4-P	0.59	0.991	0.134	0.352	0.173	0.335	0.349	0.575	0.59	5	5	mg/L
FOG	1.19	0.09	0.01	1.1	0	1.6	2.4	0.98	0.9		10	mg/L
Tot P	1.239	1.356	0.379	1.694	0.321	0.52	0.792	1.823	1.789	10	10	mg/L
Tot N	94	22	25	78	23	41	41	17	14	0.75 - 150	20	mg/L
Faecal Coliforms	200	555	345	48400	182	1125	190	405	51		5000	CFU/100mL

KJP3 = Kijange Pond 3; CWR = Community well Kalyango; KIC = Kichoke; KVD = Kibambara valley dam; RN = Matyasi landing at Albert Nile; KIJ Pond = Kijange pond; KCK = Kijange Kichoke; KJPS=Kijagi pond2; KJRP = Kijange road pond:

3.7 Total suspended solids

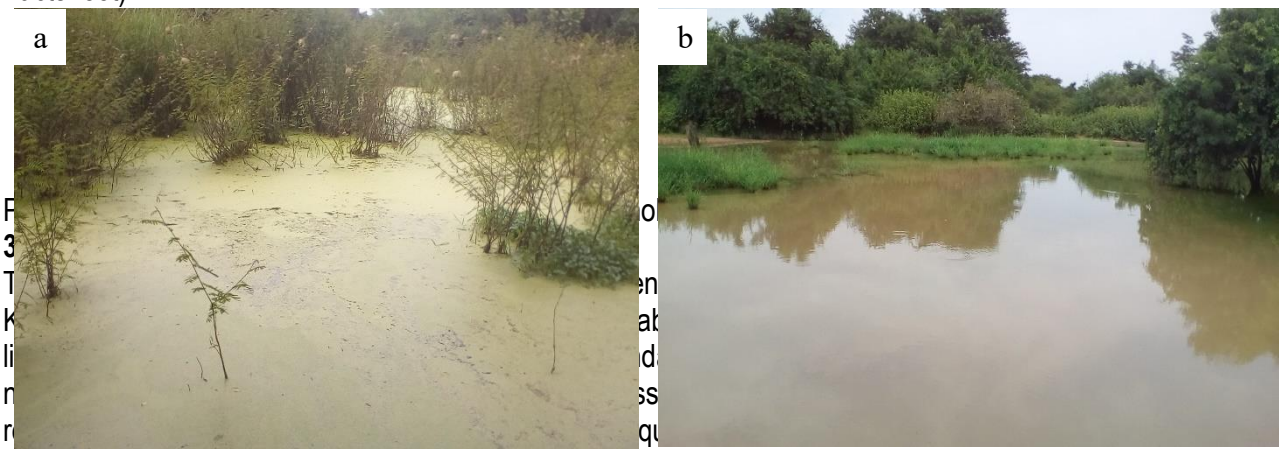
The concentrations of total suspended solids varied between 14 to 580 mg/L with the highest being measured at Kijange 3 (Table 5). Most of the water sources sampled had high TSS with concentrations exceeding the stated limit as per the NWSC standards. The high TSS may be attributed to the presence of particles deposited after surface runoff.

3.8 Total alkalinity

It ranged between 12 to 116 mg/L with the highest being measured in Kijange Pond 3 located on Buliisa Bugana road (table 5). This water quality property indicates the natural buffering capacity of water to mask the presence of acidic or basic pollutants (Water Research Centre, 2014) and in turn shield most aquatic organisms including fish from the harmful effect of pH changes. Alkalinity level depends on the constitution of the rock especially calcium is a part of the rock compound. When the alkalinity of a surface water is high, this will capably buffer acid rain and other wastes and hence reduce the effect of pH changes from harming aquatic organisms. An alkalinity up to 20 mg/L is appropriate for aquatic organisms (USEPA, 1978). Values between 20 to 200 mg/L is expected in freshwater ecosystems, meanwhile concentrations below 10mg/L points to a poorly buffered stream (Chris, 2004). According to the measured values, the water sources in Buliisa had alkalinities lying within the normal range.

3.9 Apparent color of water

Water samples from the different sites showed high apparent color with recorded levels varying between 55 to 7300 Ptco. The highest recorded apparent water color was from Kijange Pond 3 which also exceeded the stated limit of 500 Ptco by the NWSC set standard (Table 5). Such an observation could be attributed to the high amount of dissolved and suspended particles mainly composed of silt, clay and organic matter i.e. humus, decaying plant materials and algae such as dinoflagellates that are present in the water. All these contributes to the observed brown or green coloration. Normally, water is colorless. Highly colored waters are unaesthetic and can adversely impact on human health, aquatic plants, algal growth and other organisms and in turn cause a long term impairment of the ecosystem (State water Resources Control Board, Factsheet).



surface water amidst other essential nutrients, then eutrophication and associated algal blooms will arise (Fundamentals of Aquatic Toxicology, 1985).

3.11 Biochemical oxygen demand

A low BOD value was recorded across all the sampled water sources. The recorded concentrations varied between 0.96 to 33.1 mg/L, which was below the stated limits of 50 mg/L (Table 5). It is probable that the recorded low BOD values may not be the actual value because there was a delay between the time of sample collection and start of analyses. This could have led to the dying of some of the bacteria.

However, BOD values is totally based on the amount of organic matter such as dead plants, animal wastes and nutrients (nitrates and phosphates) which must be broken down by aerobic bacteria that is present within the water. The breakdown process of these organic materials necessitate that any available dissolved oxygen is consumed to complete the decomposition process. In case of a large quantity of organic matter being present in the water, then more of these aerobic bacteria will also be present and this only leads to a high BOD as the water becomes anaerobic.

3.12 Chemical oxygen demand

Between 10 to 71 mg/L of COD was recorded and the highest was noted at Kijange 3 along Buliisa Bugana road (Table 5). COD is indicative of the total quantity of oxygen that is required to oxidize all organic material in the water into carbon dioxide and water. Usually it is higher than BOD. Therefore, a high COD value points to the presence of abundant organic matter contaminant that must be oxidized. According to the results obtained, the COD of the sampled water sources were low and within the stated WHO guideline.

3.13 Calcium

Its concentration ranged between 0 to 6.4 mg/L (Table 5). This element is naturally present in surface water. Therefore, its concentrations depend upon the geological structure of the catchment area, the soil, land relief, plant cover, weather conditions, type and intensity of surface runoff, and groundwater inflows (Angela and Slavomir, 2015). Where the rocks contain the carbonates (limestone) of calcium, some of it will dissolve in waters containing carbonic acid caused by the dissolution of carbon dioxide. Under normal environmental conditions, surface waters may contain less than 10 mg/l of Ca. Concentrations below 60 mg/L are indicative of soft waters but higher concentrations (between 120 to 180 mg/L) portrays hard waters (Alken Murray Corporation, 2006). The examined water samples therefore showed that these waters were soft.

3.14 Iron (total)

Most of the sampled sites had low concentrations within the stated limit according to the NWSC standard (Table 5). However, higher concentrations (above 0.5 mg/L) were also encountered at some other sites. The concentration ranged between 0.012 to 1.109 mg/L. Under natural conditions, small amounts of Fe is present in rocks and sediments. Values between 0 to 0.5 mg/L are acceptable but higher values indicate contamination (USEPA, 2007). Its presence in water also contributes to the brown coloration of surface waters.

3.15 Orthophosphate (soluble reactive)

The concentration of this nutrient varied across the sampled sites ranging between 0.134 to 0.999 mg/L. The highest value was recorded at Kalyango valley dam (Table 5). Generally, it was low compared to the 0.05 mg/L expected of streams and rivers. Concentrations up to 0.1 mg/L is regarded as the limit for aquatic life support (US EPA, 1986). According to Sharon and Montpellier, (1997) concentrations > 0.1 mg/L has impact on streams and rivers. This is a limiting nutrient to plant growth, and that means it is in short supply relative to nitrogen. It is readily available to plants. At much higher concentrations it will trigger excessive plant and algal growth thus making it a useful indicator of pollution.

3.16 Fats oils and grease

Traces of fats, oil and grease was recorded in the water samples although in low concentrations (0 to 2.4 mg/L) below the stated limit of 10 mg/L (Table 5). The most likely source could be the fatty organic materials from animals especially the livestock. FOG in surface water may not be readily broken by bacteria and therefore can cause pollution in the receiving environments (TLC, 2016). Its impacts include raising the BOD level, creating an unaesthetic condition, trapping trash, plants and other materials as well as causing foul odors that will attract flies, mosquitoes and other disease vectors. In other cases, too much oil and grease causes septic conditions by preventing oxygen from the atmosphere from reaching the water.

3.17 Total Nitrogen

The concentrations of this nutrient varied between 14 to 94 mg/L with the highest recorded at Kijange 3 on Buliisa Bugana road (Table 5). Many of the sampled sites had higher TN concentrations that was above the stated limits (20 mg/L) by USEPA, (2003). For maximum aquatic life support only 0.1 mg/L is required, meanwhile at 1 mg/L moderation in the aquatic biodiversity becomes evident (USEPA, 1994d).

3.18 Total phosphorus

Concentrations ranging between 0.321 to 1.823 mg/L was recorded with the highest being measured at Kijange road pond (Table 5). This was high and above the 0.03 mg/L concentration that is expected as the natural background level (Dunne and Leopold, 1978). Concentrations > 0.03 mg/L can lead to increased plant growth and eutrophication. Aquatic life requires 0.025 mg/L of TP (USEPA, 1986) of which only 0.01 mg/L supports maximum diversity and this becomes moderated at 100 µg/ (USEPA, 1994).

3.19 Fecal coliform

This was found present in all the sampled water sources. Fecal coliform load ranging between 51 to 48400 cfu were recorded with the highest (Kabambara valley dam on Ngwedo-Ndandamire road) exceeding the stated limit of 5000 cfu/100 ml (Table 5). The occurrence of fecal coliform is an indication that wastes from humans and animals are present (Bob, 2017). Buliisa being a livestock rearing district, it is therefore probable that the biggest contributor of the fecal coliform load is the livestock.

Since fecal coliform is considered to be an uncontrollable non-point source of pollution programs to reduce waste and other activities related to erosion control such as constructing a wet pond to catch the first flush of water from a storm could be considered. Secondly efforts to maintain residential waste systems is important in the reduction of fecal coliforms to the watersheds. These systems need to be properly sited. Livestock especially the cattle also may contribute to problems with fecal coliform and good practices must be used to ensure animal waste is properly handled and dispensed.

4.0 Conclusions

The following are the key conclusions made.

1. TWarmer waters were encountered across all the sampled sites. The recorded temperatures were within the stated limit.
2. An alkaline condition was noted across all the sampled sites. As for the samples from the dugout well the water was acidic
3. EC was generally low at most sites except for the samples obtained at Kabolwa (Lake Albert) where it was high.
4. DO concentrations across all the sampled sites was high indicating good aeration capable of supporting aquatic life.
5. Total dissolved solids in the surface waters were generally low probably due to the macrophytes.
6. Most of the surface waters were turbid with concentrations and in some cases it exceeded the stated limits.
7. The concentrations of total suspended solids were high with some cases exceeding the stated limits.
8. The sampled waters revealed high alkalinities indicating a good natural buffering capacity of these water sources.
9. The waters were generally colored and in some sites exceeded the stated limit
10. Nitrate nitrogen an essential nutrient to plants, was generally in low concentrations but within the stated limit.
11. The BOD and COD values were generally low and within the stated limits
12. The concentration of calcium was low indicating a soft water condition.
13. Iron was found to be in low concentrations and within the stated limit.
14. Orthophosphate was within the stated limit and also in the range expected of streams and rivers.
15. Fats, oil and grease was low and within the stated limit (10 mg/L).

16. TN was high and exceeded the stated limits (20 mg/L).
17. TP was low (< 10 mg/L) but exceeded 0.03 mg/L which is the natural background level.
18. High fecal coliform load was noted in all the water samples indicating contamination. In some cases, it exceeded the stated limit of 5000 cfu/100 ml.
19. Overall, the findings of the survey according to the results indicates a nearly pristine water quality condition in all the sampled sites except for cases (TN, turbidity, fecal coliform load, apparent color, suspended solids) where the levels exceeded the permissible limits.

5.0 Recommendation

- The Upgrade of the existing roads is considered feasible. However, the current baseline reports on fisheries and water quality should be used as a benchmark for monitoring the impacts and mitigating adverse impacts of the investment on the water system in Buliisa district.
- More surveys should be planned especially during the rainy seasons, during the project phase and after completion of the project.
- Data should be collected on invertebrate communities (zooplankton and macro benthos) and phytoplankton to obtain information on species composition and biomass. This should be budgeted for and included in the next surveys.
- Assorted water quality field equipment i.e. sample bottles, vials, etc. should be procured before the next surveys. Specific requirements to be availed by the water quality specialists.
- Separate transport for the water quality team is recommended during field survey to enable flexibility during sampling and sample transportation to the central laboratory. This is important especially because of the nature and mode of samples that require limited delay between sampling and start of analyses i.e. BOD, microbiological analyses, etc.
- Sufficient time of field sampling should be planned (at least eighteen days' period required) to cover the identified sampling sites in the two districts of Hoima and Buliisa.
- Extra days should be allocated (at most two weeks) and budgeted for to enable ample time of data synthesis and packaging of specialist reports.
- Amongst the suggested recommendations, the following potential causes of pollution should be addressed and mitigation measures considered in the future surveys

Table 6. Potential pollution sources, impacts and suggested mitigation measures

No	Non point pollution contaminants	Source	Impact on aquatic ecosystem	Mitigation	Responsible Parties
1	Oil and grease	• Fatty organic materials from livestock • automobiles • Storm water runoff from	• Mortality of aquatic lifeform • Elevated BOD • Unaesthetic condition • Odors	• Contain all wastes • Proper disposal	
2	Chemicals	• Metals • Cement	• Chemical contamination • Bioaccumulation	• Minimize chemical spills and wastage • Maintain macrophyte buffer zone • Monitor effects of roadside pollutant on biota	
3	Sediment	• Improperly managed construction sites • Eroding stream banks	• Siltation of water courses • Flooding • Pollution • Loss of habitat • Poor drinking water quality • Altered stream flow	• Manage construction sites • Reduce landslide, erosion and sedimentation • Increase soil infiltration capacity	
4	Bacteria and viruses i.e. fecal coliform	• From livestock • Improperly deposited human waste	• Disease outbreak • Increased mortality	• Control disease outbreak • Control erosion • Contain residential wastes	
5	Nutrients	• Livestock feces, urine • human waste • sediments	• pollution • algal bloom • invasive species • depletion of dissolved oxygen	• provide alternative water sources for livestock • Improve sanitation • Maintain and restore stream bank vegetation • Contain nutrient load to minimize invasive species	
6	Dust and exhaust emission	• atmospheric deposition of airborne particulates	• Pollution of water sources	• Minimize dust during construction by sprinkling water	

Budget for monitoring water quality during and after construction

1. Field sampling for each survey

No	Specialty areas	Quantity	Per diem (Rate) Ug shs.	No of field days	Total amount
1	Water quality	1	120,000	18	2,160,000
2	Zooplankton	1	120,000	18	2,160,000
3	Macro-benthos	1	120,000	18	2,160,000
4	Phytoplankton	1	120,000	18	2,160,000
5	Fish ecology	1	120,000	18	2,160,000
6	Fisherman	1	80,000	18	1,440,000
7	Hire of multi probe	1	50,000	18	900,000
8	Hire of electro fisher	1	100,000	18	1,800,000
7	Fuel (2T oil and petrol)	Lump sum	20,000	18	360,000
	Total				**15,300,000**

NB: The budget is for a survey. However, the total amount can be extrapolated to meet the budget for subsequent surveys.

2. Data processing and report write-up

No	Specialty areas	Quantity	Per diem (Rate) Ug shs.	No of field days	Total amount
1	Water quality	1	120,000	14	1,440,000
2	Zooplankton	1	120,000	14	1,440,000
3	Macro-benthos	1	120,000	14	1,440,000
4	Phytoplankton	1	120,000	14	1,440,000
5	Fish ecology	1	120,000	14	1,440,000
	Total				**7,200,000**

3. Laboratory tests

No	Specialty areas	Quantity	Unit per Unit (Rate) Ug shs.	Recommended Labs	Total amount
1	Water quality	50	238,907	NWSC	11,945,350
2	Zooplankton	50	40,000	NaFIRRI	2,000,000
3	Macro-benthos	50	40,000	NaFIRRI	2,000,000
4	Phytoplankton	50	40,000	NaFIRRI	2,000,000
	TOTAL				**17,945,350**

4. Summary of Water and other aquatic resources monitoring costs

No	Specialty areas	Quantity	Total amount (UgX)
1	Water sampling	50	15,300,000
2	Data processing and reporting	1	7,200,000
3	Laboratory analyzes	50	17,945,350
	GRAND TOTAL		**40,445,350**

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Non-point source contaminants
Typical pollutant in runoff from road

Pollutant	Source
Particulates	• Pavement wear • Vehicles • Atmosphere • Maintenance activities • Sediment disturbance
Rubber	• Tyre wear
Nitrogen and phosphorus	• Atmosphere • Sediments • Livestock • Human waste
Oil and grease	• Lubricating oil and grease
Lead	• Leaded gasoline • Auto exhaust fumes • Tyre wear • Lubricating oil and grease • Atmospheric fallout • Bearing wear
Zinc	• Tyre wear • Motor oil • Grease
Iron	• metallic rust • steel structures • moving engine parts
Copper	• metal plating • moving engine parts • brake lining wear
Chromium	• Moving engine parts • Brake lining wear
Nickel	• Diesel fuel and gasoline • Lubricating oils • asphalt paving • metal plating
Manganese	• moving engine parts
Calcium	• grease

Source: USEPA, 1997

Annexes

Table of results

Kijange 1	**329102**	**232709**	**Buliisa-Bugana Road**				
Parameter	unit	n	Mean	SE	SD	min	max
Temp	°C	4	29.8	0.119	0.237	29.5	30.1
pH		4	7.5	0.270	0.540	7.1	8.3
EC	µS/cm	4	26.0	4.340	8.679	21.0	39.0
DO	mg/L	4	8.6	0.571	1.141	7.7	10.1
TDS	mg/L	4	15.8	3.092	6.185	12.0	25.0
Turbidity	NTU	4	-	-	-	-	-

Kijange 2	**329059**	**232388**	**Buliisa-Bugana Road**				
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	4	26.3	0.119	0.238	26.2	26.7
pH		4	7.7	0.251	0.502	7.1	8.3
EC	µS/cm	4	82.0	11.343	22.686	58.0	106.0
DO	mg/L	4	5.8	0.409	0.819	4.8	6.8
TDS	mg/L	4	52.0	8.052	16.104	35.0	69.0
Turbidity	NTU	4	282.3	0.667	1.155	281.0	283.0

Kijange 3	**329380**	**231680**	**Buliisa-Bugana Road**				
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	4	25.1	0.050	0.099	25.0	25.2
pH		4	7.3	0.719	1.439	5.2	8.5
EC	µS/cm	4	35.8	5.089	10.178	27.0	46.0
DO	mg/L	4	11.7	0.369	0.738	11.1	12.7
TDS	mg/L	4	22.8	3.326	6.652	17.0	29.0
Turbidity	NTU	4	-	-	-	-	-

Kijange Kachoke		**330320**	**231243**	**Buliisa-Bugana Road**			
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	3	25.9	0.239	0.414	25.58	26.36
pH		3	7.9	0.149	0.258	7.59	8.06
EC	µS/cm	3	162.0	22.502	38.974	117	185
DO	mg/L	3	10.6	0.520	0.900	9.7	11.5
TDS	mg/L	3	103.0	16.010	27.731	71	120
Turbidity	NTU		-	-	-	-	-
Kichoke		**330455**	**231012**	**Buliisa-Bugana Road**			
Parameter	unit	n	Mean	SE	SD	Min	Max

Temp	°C	4	27.4	0.054	0.108	27.2	27.5
pH		4	8.4	0.193	0.385	8.1	8.9
EC	µS/cm	4	72.8	3.449	6.898	68.0	83.0
DO	mg/L	4	10.8	1.035	2.070	9.2	13.8
TDS	mg/L	4	44.0	2.345	4.690	41.0	51.0
Turbidity	NTU	4	346.5	17.863	35.726	308.0	383.0

Kalyango	**333490**	**246356**	**Kisomera- Kalyango Nuel**				
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	4	27.8	0.031	0.063	27.7	27.9
pH		4	5.8	0.085	0.170	5.5	6.0
EC	µS/cm	4	49.0	1.780	3.559	45.0	52.0
DO	mg/L	4	9.1	0.155	0.311	8.7	9.4
TDS	mg/L	4	33.0	1.000	2.000	30.0	34.0
Turbidity	NTU	4	30.0	2.887	5.000	25.0	35.0

Albert Nile Matyasi landing			**333504**	**248630**	**Kisomera-Kalyango Nuel**		
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	4	28.4	0.241	0.417	28.0	28.8
pH		4	7.6	0.146	0.253	7.3	7.8
EC	µS/cm	4	68.3	2.404	4.163	65.0	73.0
DO	mg/L	4	8.5	0.088	0.153	8.4	8.7
TDS	mg/L	4	45.0	1.155	2.000	43.0	47.0
Turbidity	NTU	4	24.5	2.344	4.060	20.9	28.9

	Kibambara valley dam		**329211**	**237402**	**Ngwedo-Bikongoro Ndandamire**		
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	4	29.81	0.381	0.761	28.74	30.36
pH		4	7.92	0.138	0.276	7.58	8.23
EC	µS/cm	4	21.50	2.872	5.745	18	30
DO	mg/L	4	4.25	0.096	0.191	4.1	4.5
TDS	mg/L	4	14.75	3.092	6.185	11	24
Turbidity	NTU	4	-	-	-	-	-

Kabolwa	**323273**	**222830**	**Ngwedo-Bikorongo-Ndandamire**				
Parameter	unit	n	Mean	SE	SD	Min	Max
Temp	°C	4	31.7	0.030	0.059	31.6	31.7
pH		4	9.6	0.025	0.050	9.5	9.6
EC	µS/cm	4	235.0	6.364	12.728	223.0	246.0

DO	mg/L	4	7.7	0.085	0.171	7.5	7.9
TDS	mg/L	4	173.5	38.506	77.013	123.0	288.0
Turbidity	NTU	4	68.9	9.398	18.797	52.3	91.0

APPENDIX 5.8: CHANCE FINDS PROCEDURES

Appendix 5.8.1 Chance finds procedure

The following C**hance Find Procedure** shall be followed during the implementation of Bacth 1 sub-projects in Buliisa District:

a) On discovering evidence of possible scientific, Paleontological, historical, prehistoric, or archaeological remains, the contractor shall notify the Department of Museums and Monuments giving the location and nature of the finds.
b) The Contractor shall cease work in the vicinity of the site and request the responsible officer from the Department of Museums and Monuments to inspect the site and make recommendation on possible salvage within 72 hours.
c) The Contractor shall exercise care so as not to damage artefacts or fossils uncovered during excavation operations and shall provide such cooperation and assistance as may be necessary to preserve the findings.
d) The department of Museums and Monuments is located in Kampala, Kamwokya just before Uganda Wild Life Authority on the road to Ntinda (Kira road). The Commissioner Uganda Museum can be contacted on +256 772485624.

- To mitigate damage to archaeological resources, it is proposed that the construction Environmentalist, Sociologist and Engineer will train construction crew to be aware of the possibility of discovering fossils or archaeological remains, what form these would take (bones, fossils in rock, shards or pottery, arrow heads etc.) and the procedure to be followed should be as stated above.
- The Developer (MoLHUD and Buliisa District Local Government) shall ensure the Constractor and site workers are adequately inducted into the chance finds procedures and PCR management prior to construction works. Bi-annual or incidental trainings shall be conducted to ensure the workers manage the PCRs as per set regulations and guidelines.
- Further still, the contractor should develop and implement avoidance procedures. In the event of human remains, there shall be no further excavations or disturbance of the site until the responsible police authorities have been informed.

Appendix 5.8.2: PCR and Chance Finds Record Form

Date	Road	Coordinates	Caretakers' Name(s) and Telephone	Land Tenure	PCR Description	Mitigation measures Proposed by the Caretaker(s)	Mitigation Action taken by the Contractor

APPENDIX 5.9: LIST OF SCHOOLS AND ENROLMENT DATA

Appendix 5.9.1: Summaries of Enrollment for UPE schools, USE and Private Schools in Buliisa 2017

S/N	NAME OF PRIMARY SCHOOL	MALE	FEMALE	TOTALS
1	Busingiro	502	414	916
2	St marys Biiso	291	301	592
3	Nyamasoga	491	454	951
4	Mirembe	275	264	539
5	Kalengeija	335	374	709
6	Biiso	297	287	5847
7	Walukuba	521	496	1017
8	Nyamukuta	457	399	856
9	Butiaba	445	402	847
10	Bugoigo	425	435	860
11	Kisansya	541	485	1026
12	Kirama	279	239	518
13	Wanseko Town school	434	405	839
14	Ndandamire	625	560	1185
15	Paraa	343	306	649
16	Avogera	417	379	796
17	Kibambura	161	174	335
18	Ngwedo	427	395	822
19	Kisomere	530	426	956
20	Nyeramya	242	340	580
21	Kihungya	563	536	1099
22	Garasoya	228	202	430
23	Kijangi	194	170	364
24	Waiga	329	263	592
25	Kakoora	277	236	513
26	Kabolwa	283	252	535
27	Bugana	304	295	599
28	Nyamitete	431	398	829
29	Buliisa	391	343	734
30	Kisiabi	389	426	815
31	Uganda Martyrs	237	234	471

SECONDARY SCHOOLS

1	Biiso war MemSS	412	225	637
2	Blessed Mwaka college	124	141	265
3	Mukitale foundation SS	163	97	260
4	Uganda Martyrs comp SS	220	148	368
5	Bugungu SS	153	98	251
6	Butiaba seed SS	197	50	247
7	Ngwedo SS	159	46	205

PRIVATE /COMMUNITY PRIMARY SCHOOLS

1	Butiaba infants P/S	135	140	275
2	Butiaba ELSE p/s	126	119	245
3	Sana foundation p/s	49	48	97
4	Good Hope p/s	162	124	286
5	Star Model p/s	93	77	170
6	Kihungya Model p/s	114	93	207
7	St John Bosco p/s	62	57	119
8	Christ the King	37	39	76
9	Mugisa Memorial	71	87	158
10	Amari com Dev org	57	81	138
11	Treaty Junior school	141	138	279
12	Grace Junior	100	94	194
13	Kings Mordern p/s	62	52	114
14	Golden Child PS	53	64	117
15	Gods Grace p/s	18	20	38
16	Alliance p/s	103	84	187
17	Gods care NS	13	10	23
	TOTAL			

NURSERY PRIMARY SCHOOL

1	Grace Junior school	05	07	12
2	Christ the King NS	20	27	47
3	Mugisa Memorial	14	16	30
4	Amari Gardener NS	40	36	76
5	Butiaba Infants NS	66	72	138
6	Butiaba NS	35	33	68
7	Butiaba Else NS	69	68	137
8	Star Model NS	22	24	46
9	Paraa NS	13	13	26
10	Buliisa NS	06	10	16
11	Kisiabi NS	11	07	18
12	Uganda Martyrs NS	15	20	35
13	Kilima NS	30	20	50
14	St Padre NS	22	16	38
15	Good Hope NS	33	32	65
16	Nyeramya NS	16	17	33
17	Gods Mercy NS	14	12	26
	TOTAL			

Appendix 5.9.2: The Trend of Enrolment of Pupils per Class in the 5 Schools where Batch 1 Roads Transverse since 2014 to 2017

YEAR	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
KISOMERO PRIMARY SCHOOL														
2014	125	120	88	65	68	52	55	30	47	23	33	18	18	5
2015	129	111	77	65	72	73	49	38	24	30	29	13	11	9
2016	98	92	83	84	106	84	70	77	40	20	20	26	18	5
2017	120	114	105	95	103	90	94	68	50	19	44	23	14	7
	472	**437**	**353**	**309**	**349**	**299**	**268**	**213**	**161**	**92**	**126**	**80**	**61**	**26**
NDANDAMIRE														
2014	97	79	85	86	89	91	88	66	82	84	91	76	41	32
2015	96	77	70	68	79	74	78	74	77	73	70	63	37	24
2016	97	79	85	86	89	91	88	86	82	84	91	76	41	30
2017	96	61	92	82	107	110	96	117	90	105	105	68	39	21
	386	**296**	**332**	**322**	**364**	**366**	**350**	**343**	**331**	**346**	**357**	**283**	**158**	**107**
B UGANA PRIMARY SCHOOL														
2014	52	55	49	62	55	42	35	38	32	31	27	36	24	11
2015	50	40	45	35	50	30	43	42	40	22	45	39	20	8
2016	52	42	48	36	42	41	42	46	32	36	31	32	8	9
2017	50	40	46	34	40	40	40	45	30	32	29	30	15	13
	204	**177**	**188**	**167**	**187**	**153**	**160**	**171**	**134**	**121**	**132**	**137**	**67**	**41**
KIJANJI PRIMARY SCHOL														
2014	21	23	19	20	20	14	28	18	31	23	15	13	3	5
2015	30	26	28	28	40	29	22	20	36	27	19	19	11	7
2016	33	26	22	20	21	20	20	26	30	19	15	23	5	5
2017	38	32	29	25	35	21	37	27	21	26	25	22	10	16
	122	**107**	**98**	**93**	**116**	**84**	**107**	**91**	**118**	**95**	**74**	**77**	**29**	**33**
KIBAMBUR APRIMARY SCHOOL														
2014	30	38	29	21	38	32	37	27	34	34	20	27	15	17
2015	34	34	29	29	39	31	39	22	42	22	26	32	10	17
2016	34	38	26	17	28	27	19	27	32	10	21	21	13	19
2017	27	31	22	25	20	21	24	30	30	27	26	17	12	13
	125	**141**	**106**	**92**	**125**	**111**	**119**	**106**	**138**	**93**	**93**	**97**	**50**	**66**

Summary of Enrolments per class since 2014-2017 for 5 Schools along Batch 1 Roads in Buliisa

Class	P.1	P.2	P.3	P.4	P.5	P.6	P.7
Male	1309	1077	1141	1004	882	782	365
Female	1158	983	1013	924	747	674	273
Totals	**2467**	**2060**	**2154**	**1928**	**1629**	**1456**	**638**

APPENDIX 6.2.2: SUMMARIES OF SOCIO-ECONOMIC STAKEHOLDER ENGAGEMENT MEETINGS

CATEGORY	KEY FINDINGS
LG OFFICIALS	**Children Rights** • Early marriages are very rampant, most girls study up to P.5/P.6 in Primary and senior three. The attitude of parents to girl child is still poor. Cases of child abuse are rarely reported making it hard for proper follow up. There is poor facilitation to follow up child rights issues. The cases will increase with increased population. Increase funding to facilitate; CDOs sensitize the public; for LCs and Police in vetting workers. **HIV and AIDs** • Most of the people have a culture of engaging in irresponsible sexual behavior and end up spreading HIV/AIDS. Men are poor at turning up for HCT/ART. Cultural values like polygamy, early marriages, and limited awareness increase the risk. Mobilization is needed, more awareness, facilitating HCT and ART outreaches. **Mitigation Measures against HIV and AIDS** • Have an HIV/AIDS mitigation strategy for contractor, establish camp for workers, Design messages for HIV and AIDS awareness, Use radio programs to sensitize the people. Make it a comprehensive program to incorporate all social issues in construction. **Gender Relations** • Women have limited say in decision making. When a man wants to sell his cow, land, business the woman has no say. A man is free to marry as many women as he can. Women are confined to digging while men go for fishing. Reproductive health concerns remain an issue of women, limited family planning services. All health centers can provide HCT. **Employment and Labour** • The unemployment is high, people are not skilled, the youths have a poor attitude to work, and there are few investors. Labour violation issues are not prominently reported although common issues are among cattle keepers on under and non-payments. The safety net is not for workers in informal sector are not clearly defined. • The District does not have a labour officer; there is no commercial officer as well depicting weakness in labour protection. In the District there are no local contractors to have such projects implemented. Employees are likely to come from out causing discontentment from local people. **Impact of Roads Rehabilitation on Employment and Labour** **Positive** • The places will become accessible to get people's produce e.g cassava to the markets. Roads will link the communities **Negative** • Theft due to influx of people, HIV spread, child labour, and broken families may arise. **Mitigation Measures** • Continuously sensitize the people, Encourage girl children. Build capacity of local government officials in labour issues, HIV issues, and child protection. **Sustainability of ARSDP** • ARSDP was not captured by the current District Development Plan. DDP will be reviewed around October/December 2017 to incorporate ARSDP. The District will have to plan and budget for roads maintenance.

	Capacity Building • The District receives little funding from Government because of the small population yet the actual infrastructural demand are huge. Capacity building in M&E, ICT is needed. There is a roads committee.
HEALTH WORKERS	**HIV/AIDs** • Increasing rates of HIV were attributed to influx of people from Congo, West Nile, and other areas, stigma, seasonal movements of fishermen along with the fish catch patterns on the lake, early marriages, polygamy, and complacence to HIV. The problem is more along fish landing sites like Walukuba, Bugoigo, Songalendu and Wanseko, Nile parish, Kisomero, and Kalyango, Katalaba, Bugana. **Impact of Roads Rehabilitation on HIV and AIDS** **Positive** • Improvement of the access roads will provide ease in movement of clients who request for transfers to further facilities. It will quicken delivery of hospital logistics that will include ARVs and testing kits. **Negative** • Increase in HIV/AIDS including re-infections, pressure on existing ART services, teenage pregnancies **Mitigation Measures** • Referrals of construction workers on ART, set up workers camp, provide testing kits and drugs to workers, sensitize workers and community on HCT/ART, recruit site nurse for workers, and Doctor on call.
PEOPLE with HIV/AIDS	**HIV/AIDs** **Trends** • HIV is increasing and men are not coming out to test and get treatment. When tested positive, men tend to disappear. Men don't disclose to their partners. Lakeshores are more affected than others eg. Wanseko and Butiaba. Women's negotiation for condom use is still poor. **Most Affected Sections of the Population** • Women are most affected, Boda Boda riders, bar operators (who are mostly women/ girls), drivers. **Available HIV and AIDS Response Mechanisms** • Provision of ARVs by H/Cs, Sensitizations, free condoms, Home visits by VHTs **Existing Gaps** • Lack of confidentiality by the Health workers in ART clinics, stock out of ARVs and Opportunistic Infections (OI) drugs, preferential treatment of patients linked to corruption of health workers, poor time keeping among health workers, limited sensitization campaigns, limited social support for PHAs. **Impact of Roads Rehabilitation** **Positive Impacts** • Mobility will be easier after road construction for HIV and AIDS services delivery to communities. • PHA will be able to get ARVs even during rainy seasons due to better roads **Negative Impacts** • Road Construction will increase HIV/AIDS, disintegration of families and marriage breakdown due to adultery, School drop outs may increase due early age marriages and unwanted pregnancies. **Mitigation Measures**

	• Conduct HIV sensitizations, Sensitize parents about the dangers of early marriages, Provide suggestion boxes at designated areas to report misconducts of workers, Sensitize the workers on HIV, Provide for contract workers time to visit their families, constant provisions of condoms to the communities. **DISABILITY** • PWDS are seen as incomplete people, who are helpless. The main forms of disability here include Mental Illnesses, the deaf, blind, and epileptic. Buliisa Hospital has a ramp. **Most challenges faced by the disabled in this community** • Lack of items like wheel chairs for mobility, Poverty, denial of the opportunity to go to school. **Impact of the Road Rehabilitation on PWDs** • Growth of road side business. However, accidents may increase threatening PWDs, women PWDs may be raped. **Mitigation** • Providing humps along the road to slow down motor road users, Road signs along the road to indicate dangerous places should also be provided, Sensitize the community and contractor on disability. **Community Access to Information** • Major channels include Radios, Mobile phones, television, the local council, meetings, Notice boards, places of worship and schools, Peer to peer, Burials, Funerals and all other ceremonies.
TEACHERS & SCHOOL MANAGEMENT COMMITTEES	**Children Rights** • The schools have child right clubs to promote children rights awareness. **Children rights Abuse** • Common child rights abuses include child neglect, child labor, early marriages **Triggers of Children Rights Abuses** • Poverty, drought, cultural values, weak law enforcement, poor housing, limited sensitization about rights and obligations. Perpetrators of children abuse were reported to be mainly parents. **Children Rights Protection Mechanisms** • Local Council Leaders, CDOs at the Sub County, PTA and some NGOs like World Vision. • Children rights abuse cases are usually reported to teachers, police, and parents and sometimes to clan leaders. **Impact of Roads Rehabilitation on Children Protection** **Positive** • Easy access to schools and health centers, market for food, gravel, etc, **Negative** • Children will be exposed to accidents, child labour, and interruption of children's learning, absenteeism, school dropouts, air and noise pollution. **Mitigation Measures** • Construct the road quickly, restrict/control children, hoarding schools, sensitize the schools on child protection, and establish safety committees in school, works near schools can be done on weekends.
SCHOOL CHILDREN	**Children Rights** • Poverty makes parents unable to provide for the children's needs. Sometimes their priorities is alcohol rather than providing for education needs. Some children rights known to the school

	children include; Right to education, Right to religion. Right to life., Right to move., Right to play, Right to shelter, Right to clothing and Right to eat. **Children rights Abuse** • Denial of education, denial of food, mistreatment (canning, abusing), corporal punishments, early marriages in the villages, child labor, sending children to trading centers at night, child neglect, defilement and rape. **Triggers of Children Rights Abuses** • Poverty, parents' desire for material wealth like cows, preference of boys to girls, poor attitude towards children with disabilities, ignorance about the value of education, cultural values. **Perpetrators** • Parents, neighbors, teachers (they overcome them at school), uncles, sunties, Step mothers – making children do a lot of work., step fathers – deny children food, the youth – rape the girls. **Where Children Abuse Cases are reported** • Police station, School teachers, Lc1 chair person, Lc111 chair person, Vice chairperson, Sub county office, Probation office, Parents. **Children Protection Mechanisms** • Kakindo orphan care (care for orphans), LACWADO (sensitizations), Churches –like Kigwera Miracle church – (takes care of orphans), Local Councils and Police. **Impact of Roads Rehabilitation on Children** • Increase in prostitution, HIV/AIDs spread, STIs, rape, accidents, school dropout, early marriages, teenage pregnancy, kidnap of children for ritual purposes, displacement of homes, destruction of property, air pollution, population increase. Jobs for community members. **Mitigation Measures** • Implicating abusers, hoarding schools, watering roads during construction, sensitize parents and contractor works on child protection, control alcoholism, road signs.
LOCAL COUNCILS LEADERS	**<u>HIV/AIDs</u>** • HIV is on the rise, there are many bars, influx of new people in the District, girls are being transported from Kibaale, people fear to do testing. The youths are living recklessly engaging in risky sexual activities. The introduction of ART makes hard to identify HIV sick person. Alcoholism, night discos, poverty, all explains the increase. **Most Affected** • The most affected are the youth 12 years and above who are being attracted to new things, some money and others attracted by new girls and the bar operators. Most risky areas include Wanseko, Katanga and Kisansya Trading Center. **HIV and AIDS Services available** • HCT, Condom distribution by H/Cs and Tullow, Care and support from NGOs, CSOs like Kakindo Orphans Care, BURUDO, and BUHASO. Government through MOH is providing all the prevention and ART services that are needed. **Impact of the Road Rehabilitation on HIV/AIDS** **Positive** • It will be easy PHAs to access ARVs if the road is rehabilitated. **Negative** • Influx of more PHAs and more sexual workers in the area. **Mitigation Measures**

	• Community HCT awareness, Train workers in HIV prevention, monitor workers to avoid interactions with women, restrict alcohol use, set up camps for workers, supervise contractors to provide condoms. . **<u>Children Rights</u>** • Children have some rights however not all are given. Children are denied education, food, forced in early marriages among others. **Triggers of Children Abuse** • Poverty, orphan hood, alcoholism, marriage breakdowns, poverty (no money to take the child to school). **Where Cases Are Reported** • To police especially the child and family protection unit, LCs, Community Development Officer at the Sub-county level, neighbors and other care takers. **Impact of the Road Project on Children** • Accidents and deaths, children may engage in theft of materials, child labour, child sacrifice, defilement, family breakdown, absenteeism at school, early marriages. However after construction, children will have easy access to schools. **Mitigation Measures to Prevent Child Rights Abuse** • Sensitization on child rights on radios, sign posts messages, supervise the contractors. **Capacity gaps** • The LCs are left with a lot of cases and are not helped by the District. **<u>Disability</u>** • In this community PWDs are taken as other people. Even on LC committees we have a representative, we usually call them for meetings and whenever they don't attend, information is usually taken to them. • When inviting for meetings, invitations go at once for both PWDs and other members of the society. **Major Forms Of Disability** • The blind, epileptic, the deaf, the dumb and the physically disabled and those that are mental problems. **Mechanisms** • Government supports the PWDS through livelihood programs and groups, Provide medicine to those with epilepsy, USDC brought in projects for handcrafts, improved seed, sewing machines and hoes, giving wheel chairs and paying for the operation and treatment of PWDs, provision of improved seedlings and hoes. • They have a representative at the LCI, II and III who usually fight for the PWDs rights. **How Will The Road Project Affect The PWDS** • The PWDs cannot get jobs like casual labour from the contractors because of their disability. Access of PWDS will be affected, accidents to PWDs with hearing problems. **Mitigation Measures**

	• Put diversions during construction, put sign posts, offer jobs to PWDs, hold community meetings on PWDs. **<u>Gender Relations</u>** • Gender balance is outside home but in the homes, a woman should be submissive to the husbands. Men drink and women will not talk. Men sell things in the homes without the consent of their wives and the gift the man gives her wife is to bring another woman. Family members take by force the resources and properties of the widows and those who refuse are chased away. Women do the digging while men look after cattle and drinking. There is no say for women. • Men dominate decision making processes. Women are denied access to property like land of their deceased husbands. Sometimes you find women respect men just and even in a church if a man comes, a woman leaves the chair for the man not that she is forced but willingly does it. • On bride wealth, its men who usually make decisions and women don't make any decisions. There isn't any agreement between the two. **Impact of the Road on Gender Relations** • The workers will take peoples women. There will be divorce and fighting in families, HIV will increase in the families. However, some women will also get jobs and will set up food joints. **Mechanisms To Be Put In Place** • Sensitize the community on gender, engage the contractors to respect gender issues. **<u>Security</u>** • The security is not ok at all. Since 2012 it has been worsening, there is stealing of animals, crops and church properties like generators, chairs e.t.c. **<u>Crime Rates</u>** • Theft of animals, fighting, assault, and land wrangles especially as a result oil discovery because people know that oil will bring a lot of money. Crime rates are average but land related crimes are very high. **Who Ensures There Is Peace In The Community?** • The community members report to relevant authorities like the police, LCs and other security agencies like UWA. **How Will The Project Affect Crime Rate** • More things to steal on the road will increase such as fuel. Crime rates will be low if the project employs locals but if it employs people from far, the rates will be high. **What Should Be Done To Mitigate Crime Rate** • Put in place by laws, the project should make sure that more locals are employed and only technical staff comes from outside, report immediately to LC and Police. **<u>Labour And Employment</u>** • The rates of unemployment in this community are high and the few projects that come don't give the available jobs to the local community members. • The few jobs that are available, males are the most considered but most of them have no skills however for the casual labour people here can work.

	Labour concerns • Workers for this project might come from very far and we the community might miss out. There is fear that those that will be employed might not be paid their wages. There is also fear that as a result of not being paid, there will be strikes / crimes and hence instabilities in this community. **Mitigation** • The community should get the first priority of being employed and this will guard against many evils. • The project should employ supervisors to make sure that the rights of laborers are met. **<u>Cultural And Ethnicity</u>** • There are conflicts especially between the Alur and Abalaalo because of land**.** The existing cultural groups here are Bagungu, Alur and Balaalo(these are cattle keepers comprising mainly Banyankole and Banyarwanda). **Cultural values** • Most of the cultural values are agreed upon by families and once the family has agreed, there is nothing that can be hindered. In case any cultural artifacts discovered, it can't affect the project as these things can be easily relocated. It will just be a matter of compensation for its relocation costs. **Roles of cultural and religious leaders** • Religious and cultural leaders provide guidance and leadership in case of stand stills and can help in conflict resolution. **<u>Social Amenities</u>** • There are health centers and schools along the roads. All the bore holes constructed are working but we can't use them because the water is too salty **The Impact of the Road Project on the Existing Social Amenities** • There are no social amenities that will be affected.
NGOs/CBOs	**<u>HIV/AIDs</u>** • HIV/AIDs prevalence rate is high mainly amongst sub counties along the lake shores and the most affected being Butiaba, Kigwera and Biiso, Wanseko particularly wanseko trading centre, Katanga village , Ngwedo particularly in villages of Muvule, Avogera and Kisomere. **Most affected are the** • Mobile workers, women within the fishing communities, long distant workers within the area and , the youth especially the females, Boda cyclists **Triggers of the HIV / AIDS trend** • Migration of the family heads, ignorance and lack of awareness, illiteracy, stigma related to HIV. **HIV and AIDS Response Mechanisms in Place** • HIV awareness, condoms distribution, HCT, outreach campaigns on HCT/ART, moonlight campaigns, SMC. **Support Mechanisms** • BIRUDO, World Vision, LUCWADO, IDI **Capacity gaps**

	• Inadequate facilitation towards ensuring that services are brought closer to the beneficiaries, lack of enough drugs, limited supply of testing kits, limited trained personnel. • Lack of special care to Children living with HIV. **Impact of Roads construction on HIV and AIDS trends** • Contractors interacting with the community yet their HIV status are not known, the outcomes of the social interaction may increase HIV/AIDS trends. **Mitigation Measures** • Compulsory HIV testing for the contractors workers, Health talks through voluntary counseling, sensitizations during and after construction, constant and adequate sensitization to the youth and the contractors. **Children Rights** • Cultural practices tend to interfere with children's rights; children generally are unaware of their rights**.** Girls are married off at a tender age. **Major Child rights abuses** • Rape, defilement especially among the fishing villages, child neglect attributed to gender based violence within families, child battering and dissertation, denial for education, early marriages, and child labor. **Triggers of the child rights abuses** • Cultural beliefs trigger off the child abuse, Ignorance of the parents, Gender Based Violence in families, migrant workers, weak laws, drug abuse and alcoholism. **Existing Protection Mechanisms** • Most of these cases are reported at LC, Police, Probation and Social welfare Officer. Radio talk shows that educate and create awareness to the children on their rights. **Roads project effect on child rights during, and after construction** • Child labour because the contractors perceive children as renderers of cheap labour, rape, school drop out of children. **Mitigation measures** • Sensitizing the community on children rights, following labour laws, establishing workers' camps. **Disability** • Communities are aware of the PWDs structure within societies; however, PWDs are normally left out in public affairs. **Major forms of disability** • Deaf, the blind, Epileptic people and physically handicapped **Existing systems to improve the life of PWDs** • NGOs like Site Savers in Masindi, Buijanga Sub County, extend technical training support to PWDs in tailoring courses, sewing activities to empower them. • Sight Savers provided tentative support to PWDs in form of providing wheel chairs to those that crawl on bare ground, training them in hairdressing, tailoring and sewing. Uganda Society for Disabled offers seedlings to PWDs. **Roads project effect on the life of PWDs during and after construction**

	• PWDs will not be able to attain job opportunities during construction works, open borrow pits will affect the mobility of disabled people, accidents. **Mitigation measures** • PWDs should be given an opportunity to engage in casual labour force, have enough road signs, fill all borrow pits, sensitize workers on PWD issues. **<u>Gender Relations</u>** • Cultural norms affect women's allocation to ownership over productive and non-productive resources. Men dominate all resources and decision making. Women are not entitled to property inheritance unless she owns resources. Bagungu women indulge more in daily domestic work; practice agriculture while as the men engage in fishing and others prioritize to drinking. Girl child education is given least priority over boy child education because they are considered as wastage of money, people who are entitled to be married of and will not bring any returns to the family. • Early marriages are common among the Alurs between the age brackets of 14 – 16 years. Women have minimal opportunities in public spheres as compared to the men. • Women engage more in fish net weaving and sewing and agriculture whereas the men engage in fishing and animal keeping. **Protection Mechanisms in place to empower the female gender** • Civil societies play a big role in ensuring that women are empowered economically and all other aspects through sensitization campaigns so that they can defend themselves. Community policing sensitizing and educating women on their rights, and entrepreneur trainings by NUSAF, UWEP, TOTAL, and TULLOW. Through the Uganda Women Empowerment Program (UWEP), entrepreneur trainings are extended to the women to ensure sustainability within their families and societies. **Effect of the Road Project on Gender Relations** • Gender imbalances might arise during construction because the men might be favored more for labour, female workers may be sexually harassed by their counterparts, women may not be allowed by their husbands to work on the roads, GSBV may arise due to compensation money distributed to men while leaving out women. **Mitigation Measures** • Offering opportunities to women during construction, training women groups, sensitize the community on gender issues, contract workers should be restricted (camps), identifying and utilizing gender champions.
PLWDs	**<u>Disability</u>** • PWDs in this community are taken as not people like others, we are discriminated at family level like we can't own land equally as like other family members. The budget of 2017/2018 at sub- county of Kigwera is only 400.000/=, we have made noise in the council but it has remained like that. It has been 200.000/= and still in other sub- counties, it is still like that. However the whole community knows that PWDs have rights like others to education, land and other resources. **Forms of Disability** • Physically handicapped, epileptic, mentally ill, blind, dumb, deaf. **Existing Systems**

	• There is an organization called USDC (Uganda society for disabled children), they are providing drugs for epilepsy, surgery and last week they distributed maize, beans and hoes to families that have disabled children and disabled people themselves. • The PWDs have been included on LCI, II and III committees to have a representative that can represent PWDs views, however apart from that no other platforms where the PWDs are given opportunity to air out their views. **Impact of Road Rehabilitation** • Ease access to markets, however, they may be unable to access homes during construction due to open excavated and barrow pits, sand heaps, accidents during and construction. **Mitigation** • Create alternative access routes, sensitize the community and contractor on disability issues, cover all barrow pits, sign posts and speed humps need to be put in place to reduce on the speed of vehicles and motorcycles to avoid accidents, he roads need to enlarged and widened.
PRIVATE SECTOR	<u>Children Rights</u> • Few children are informed of their rights; Culture tends to influence children's rights more. Communities are aware of children's rights and the children themselves are aware of their rights. **The common forms of child abuse include:** • Child neglect, battering and child labour. **Triggers of Children Abuse** • Domestic violence within families, Alcohol and/or drug abuse, Frequent mobility and change of addresses especially within fishing communities, Inadequate Housing, Fear for responsibilities by the parents. • Cases are normally reported to the District Community Development Officer, Child Protection Unit (Police), and Probation Officer. **Impact of Roads Rehabilitation** • Child labour, teenage pregnancies, school dropout, child trafficking, accidents. Positives include easy access to schools. **Mitigation Measures** • Enforce strict laws towards child labour, sensitization of communities on children's rights, Road signs at schools near roads.
TRADITIONAL LEADERS AND RELIGIOUS LEADERS	**<u>HIV/AIDs</u>** • HIV/AIDS has increased especially among fishermen along landing sites of Wanseko, Kabolwa, Walukuba. There is a lot of influx of people and the rate will continue to increase. **Triggers** • Spread of HIV especially among the youth due to discos and other social functions, Influx of people from other region has also led to rise in spread of HIV, The youth and women are highly vulnerable the youth are living reckless life. **HIV and AIDS response mechanisms in place** • The District together with IDI are involved in HIV treatment. • District quarterly meetings District AIDS committee share experiences on quarterly meetings. • Kingdom representatives fully participate in the meetings. **Impact of the Road Rehabilitation on HIV/AIDS**

- Construction of road will reduce HIV prevalence because the roads will make people more occupied in business, they will also get employment which will improve on their earnings.

Challenges

- Risky sexual behaviors may happen, limited supply of ARVs mat affect those on treatment, workers may be discriminated due to HIV.

Mitigation

- It is possible the road contractors (employees) should be from Buliisa or else any new person should be tested for HIV before getting jobs or place them in the camp.
- The government should sensitize communities on their rights during construction and all sign posts necessary should be put in place during construction where compensation is due to be effected.

Gender Relations

- Men are head of families and women cannot be heads of families.
- Women come to get married without land and join customary land belonging to men's family she is not supposed to own land except for peace of land they get as a family out of their sweat.
- Because of HIV/AIDS widow inheritance is ceasing.
- Most of girls find boys or men for marriage themselves and parents are involved at level of getting bride price.
- Most women first report to husband's friends or clan heads and later CDO, probation and later to police.
- Probation office is at fore front of assisting women whenever their rights are violated. But I feel religious structures should be used because they are the ones in charge of presiding over marriage frictions.

Impact of the Road Rehabilitation on Gender Relations

- Road constructions will open up village to become more accessible, land will gain value; access to major social amenities will be eased. All these will lead to improvement in welfare of families.
- If there is any compensation, both men and women should participate for transparency this will assist to enhance peace.

Cultural Issues

- There are cultural groups "Balamansi" in charge of sacred places, other music and dance drama groups; fishing and grazing are also done according to our cultures.
- Cultural conflicts have existed over land issues Alur and Bagungu. Bagungu and Bajunga of different clan but of the same ethnicity. Bagungu are dominant cultural groups. Alur are cultivators while Bagungu are pastoralist these activities lead to conflict. Balaho and Bagungu conflict emanated due to grazing and cultivation land from 2004 to date. Today where there was grazing land Alur community have decided to cultivate it hence spilling Bagungu-Alur conflict. Alur are believed and seen as cannibals, (man eaters) and practice a lot of which craft. Bagungu beliefs are natives of the District and are unwilling to be ruled / led by Alur in political positrons.
- There is Bugungu Heritage Information centre, Bugungu language Board and other several music, dance and drama and kingdom representatives.
- Poor fishing methods by Alure.g use of lights which was not used by Bagungu who had fishing holidays; Bagungu did not make permanent settlement at the lake which Alur are doing now.

	• There are sacred places "Mpuuma" which should be identified before construction and wetlands should be preserved. • Cultural and religious leaders do preserve cultures, and protect cultures and cultural sites; identify the cultural Cultural leaders preserve cultures promoting activities:- Treatment and heading purpose, Lightning and thunder – Rutua, Rain making rituals Wind rituals, Snake rituals, Animals rituals
POLICE	**<u>Gender Relations</u>** • Most of the productive resources are controlled by the men. • Cultural beliefs that accord men as main bread winners to be superior over the women. No widow retains property rather the in laws solicit for possible ways (false accusations to blame her) to ensure that she does not possess any. In most community gatherings women segregate themselves from the men. • Women engage more in agricultural practices, whereas the men are engaged in fishing in Wanseko. Finances from the harvests are always allocated to the men for ease of distribution and use. When women attempt to assert them, GBV is the result. Gender Based Violence normally arises from concerns over ownership and allocation of resources amongst the both sexes. Girl child is considered to a resourceful through bride wealth they are normally married off the age of 13 years. • The above trends are attributed to ignorance, illiteracy and lack of exposure with the main perpetuators being the men because of the way society grooms them through nurturing them as bread winners in all aspects. • Even when battered, they remain silent as a sign of respect to their husbands within the community. • The above trends are as a result of lack of access to information, awareness about women's rights, and backwardness within society members. **Impact of the Road** • Destruction of settlements along or within the road reserves, men might benefit more than women for example on compensation. **<u>Security And Peace Building</u>** • Ethnic and Tribal conflicts between the Alulus and Bagungu natives where the Bagungu are taken to be the superior and ruling group within the area. Crime rate is high and mostly among the youth. Major forms of crime include bribery, defilement and theft of property. • Existing conflicts within the areas of Bugana, Waiga were mainly among the Balalo (Banyankole) Vs the Bagungu. The Bagungu used to use spears as their fighting weapons whereas the Balalo used their herding sticks between 2008 - 2011. **Institutions to liaise with towards crime rate minimization** • Crime Preventers. Local Council Units, Local defense for particular areas of operation, Police, UWA. **Common Crimes Registered** • Crime rate within the community is minimal with the, assault arising from land related issues, child abuse and domestic violence. All these issues cannot be curbed as a result of limited resources including man power, highway patrol's to monitor and execute activities. **<u>Children Rights</u>**

	• Being a central for agricultural produce, most of the children are engaged in labour to ensure effectiveness in yields. Most of children do not go to school on every Fridays engage in cultivation. Major forms of child abuses include child labour, Defilement – this is normally solved through compensation by the two parties, early marriages girls are married off without their consent. **Social Amenities** • Bugana Health Centre II, Ngwedo Primary School, Kisomero Primary School, Avogera Primary School, Kibambura Primary School, Waiga Primary School, Bugana Primary school, Kijangi Primary School, Ndadamire Primary School and Bugungu Secondary School. **Mitigation Measure** • Ensuring that destructed amenities are replaced and repaired and Schools should be fenced off to ensure that during the time of construction children are not destructed.

APPENDIX 6.3: LIST OF ORGANIZATIONS CONSULTED DURING SOCIO-ECONOMIC BASELINE

Name of the Organization	Office Location	Type of Organization	Contact Person , Title , Address and Phone number	Thematic Areas of Work/Operation	Geographical Coverage (List of Sub counties)	Date Consulted
Kakindo Orphans Care	Buliisa Town Council Paara Road	Non-Government Organisation	Kazimura Alice Executive Director KAKINDO CellNorthern Ward Buliisa Town Council Tel : +256 782 - 306875 P.O BOX 228 , MASINDI	Care and Support of Orphans Health and Sanitation Management of natural resources and extractive industry(Oil and Gas) Livelihood support,food and nutrition Gender and Human right issues Education Child Protection	Ngwedo Kigwera Biiso Butiaba Kihungya Buliisa & Buliisa Sub County	15TH-Aug-2017
COMMUNITY INTEGRATED DEVELOPMENT INITIATIVE (CIDI)	Buliisa Town Council Paara Road	Non-Government Organisation	KABAIKARAMU VICENT Buliisa Field Officer TEL: +256 752 – 929199	Constructing VIP latrines in Schools Implementing WASH Facilitating Village Savings and Loans Rehabilitating Boreholes Advocacy HIV/AIDS awareness	Ngwedo Kigwera	17TH-Aug-2017
Buliisa HIV/AIDs Support Organisation (BUHASO)	Kigwera Sub County Hoima-Wanseko Road	Community Based Organisation	Kwolekya.W.Perezi Exective Director Tel : +256 782 - 437996	HIV/AIDs Support	Ngwedo Kigwera Biiso Butiaba Kihungya Buliisa & Buliisa Sub County	17TH-Aug-2017
Buliisa Initiative for Rural Development (BIRUDO)	Buliisa Town Council Paara Road	Non-Government Organisation	Paolyel Mp Onencan Executive Director Tel : +256 772 – 994527	Land Rights Access to Justice HIV/AIDS Governance & Accountability on Service delivery Environment and Natural Resource	Ngwedo Kigwera Biiso Butiaba Kihungya Buliisa & Buliisa Sub County	17TH-Aug-2017
Albert Nile Hotel	Buliisa Town Council Paara Road	Private Sector	Johnny Kazimura General Manager Tel : +256 784 – 807089	Accomodation Services Conference Facilities Restaurant Services	Kigwera	17TH-Aug-2017
Adonia Hotel	Buliisa Town Council Paara Road	Private Sector	Allan Aligonza General Manager Buliisa Tel : +256 772 - 670879	Accomodation Services Conference Facilities Restaurant Services	Town Council	16TH-Aug-2017

APPENDIX 6.4: LIST OF ORGANIZATIONS CONSULTED DURING ENVIRONMENTAL BASELINE

Stakeholder Category	Specific Stakeholders	Interest/ Mandate	Method of engagement	Date
Uganda National Roads Authority (UNRA)	Department of Social and Environment Safeguards. Hoima Station Office	The mandate of UNRA is to develop and maintain the national roads network, advise Government on general roads policy and contribute to addressing of transport concerns, among others. The roads join UNRA roads and UNRA is also implementing ARSDP component 1.	Formal meetings	6th/09/2017
Uganda Wildlife Authority	Directorate of Conservation Management. Wardens of Murchison Falls National Park, Buliisa District	Responsible for the sustainable management of wildlife resources and supervise wildlife activities in Uganda both within and outside the protected areas. The roads are near Bugungu Wildlife Reserve	Formal Meetings	18th/08/2017
National Forestry Authority	Directorate of Corporate Affairs: Environmental and Social Impact Assessment and Research (ESIAR) Section.	Responsible for the management of Central Forest Reserves (CFRs) on a sustainable basis, as well as, to supply high quality forestry- related products and services in Uganda.	Formal Meetings	24th/08/2017
Local Government Staff	Works, CAOs, Production, Community Development, Education, Natural resources	Charged with overall coordination of project activities in the District Monitor Social and Environmental concerns related to the project Monitor grievances redress mechanism within the District related to the project Consolidate the different reports from the Sub Counties/ Town council into one District progress report Coordinate District level planning to ensure that project interventions are in line with the District Development Plans Support the technical supervision of consultants e.g.; District Engineer	Formal Meetings, Individual consultations and formal agreement	18th/08/2017
Security Agencies	Uganda Police Force	Interested in ensuring that there is law and order, minimize crime and accidents on the roads and camps	Individual consultations and formal meeting	18th/08/2017

CSO	Non Government Organizations, Community Based Organizations	Good at advocacy on behalf of the community for example where there are concerns like child labor, protection, environmental issues etc , Do lobbying for more services/ funds to synergize the project, Can mobilize for a documentary in collaboration with other stakeholders, Mobilization of the grassroots beneficiaries to support the project initiatives, Good at research, monitoring and reporting, Can offer trainings on behalf of or jointly with the District or Ministry of Lands, Housing and Urban Development.	Formal Meetings	18th/08/2017
Private for Profit Sector	Private Sector	Local suppliers of materials like cement, culverts, oil suppliers, transporters, food suppliers, restaurants, hotels/ lodges, Ensure timely flow of resources/ inputs necessary for project progress, Easy to mobilize because they have a profit after selling their goods and services to the project, Good at Corporate Social Responsibility (CSR); eg- Total E&P and CNOOC can offer to plant trees along project roads/ areas.	Individual consultations and formal meeting	25th/08/2017
Cultural Institutions	Churches, Mosques, Bunyoro Kitara Kingdom	Ensure that PCR are managed during construction affected, assist in grievances management	Formal Meetings	18th/08/2017
Makerere University	School of Forestry, Environmental and Geographical Sciences	Ensure that biodiversity, forest resources, environment and landscapes as well as tourism sites are conserved through continuous research, innovation and training.	Formal meetings	14th/09/2017
The General Community	Other community members	Provide ownership of the project, report safeguard issues, provide information for grievances management	Formal Meetings	14th-18th/08/2017

APPENDIX 8.1: GRIEVANCE EDRESS MECHANISM GUIDELINES

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

GRIEVANCE MANAGEMENT GUIDELINES

July 5, 2017

1.0 Background

The Government of Uganda with support of the World Bank (IDA) is implementing the Albertine Region Sustainable Development Project (ARSDP) to facilitate a more orderly, sustainable and inclusive transformation of the Albertine Region and improve the local infrastructure and connectivity for rural communities. The project aims to directly benefit people living in the Albertine Region so that they can share in the promise of prosperity from the development of the region.

The project has three major components being implementing by different MDAs which include;
Regional Access and Connectivity implemented by Uganda National Roads Authority. This component aims at improving overall accessibility to the Albertine region, reduce travel times and improve access to markets and services. It will focus on upgrading of Kyenjojo-Kabwoya-Buliisa-Kigumba Road to a paved Class II (bitumen) standard.
Local access, Planning and Development implemented by Ministry of Lands, Housing and Urban Development. This aims at increasing rural accessibility to markets and services, prepare selected key urban centers for growth and provide economic infrastructure targeting key sectors in the region
Skills Access and Upgrading implemented by Ministry of Education and Sports. This component is designed to upgrade BTVET quality in oil and gas, orient it to the private sector demands and provide access to BTVET to the people living in the Albertine Region.

The Ministry of Lands Housing and Urban Development is responsible for implementing component 2 of the project focusing on physical planning and local infrastructure development through rehabilitation of rural roads and construction of economic infrastructure which include markets, fish landing sites, and slaughterhouses/ abattoirs.

During construction and post construction phases of the project, a number complaints and grievances might emerge. In accordance with the World Bank Resettlement Policy Framework and as a matter of good practice, substantial and systematic mechanism of handling and redressing these complaints and grievances is required.

These guidelines have been formulated to support MLHID, the participating local governments, contractors, communities and other stakeholders on the procedures to be followed in handling complaints and grievances related to the project.
It will be a requirement for the MLHUD to ensure that different stakeholders have received effective capacity building in complaints and grievances redress.

These guidelines do not replace the existing legal grievance system. They are rather developed to provide a proactive mechanism to manage project related complaints and grievances in a less adversarial, less costly, quicker and participative way. At any stage, an aggrieved party may be free to use alternative redress including existing legal processes in Uganda. The grievance system will last for the entire project period.

2.0 Justification for Grievance Management Guidelines

The Project Appraisal Document (PAD, section 53) and the Project Operational Manual (POM, Section 6.7) provide for the requirement of having clear implementation guidelines. Grievance redress mechanisms are among the requisite procedures for the implementation of the Environmental and Social Management Plans (ESMP).The World Bank Resettlement Policy Framework (RPF) requires that a clear grievance management system is established and the stakeholders sensitized in the existing grievance redress mechanisms. Therefore these guidelines have been formulated to operationalize the PAD, POM and RPF.

3.0 Purpose of the Grievance Management Guidelines (GMG)

The ESIA reports revealed potential sources of grievances to include land acquisition, loss of livelihoods, protection especially child protection (Violence Against Children), Gender Based Violence, health issues, HIV and AIDS, accidents, sexual harassment, conflicts, family displacement, theft, cultural shocks, and environmental issues among others. The purpose of the grievance management guidelines is to ensure consistent, formal and effective institutionalized framework of preventing, identifying, engagement, settlement and minimizing these costs during project implementation.

4.0 Objectives of Grievance Management Guidelines

- To enable a systematic identification of grievances from affected communities and allow for pre-emptive engagements at an earliest opportunity.
- Provide impartial, equitable, appropriate and consistent responses to complainants.
- Ensure fair, timely and equitable compensation for loss of properties of local residents and other affected parties.
- To promote dignity and protection of marginalized groups including women, children, people with disabilities among others

5.0 Guiding Principles

This grievance management guidelines are founded on critical pillars of good governance and among the core guiding principles will include;

- Promote equity and fairness in all ARSDP operations.
- Ensure effective participation of stakeholders in grievance management
- Promote transparence and accountability in implementing the ARSDP at all times and levels

6.0 Grievance Management Structure

- The grievance management structure will be anchored to institutionalize the decentralized setting of the Local Government system. Hence committees shall be established at Sub County, Town Council, and District level to manage grievances.
- The key components of the grievance management structure will include the following;
- Complaints and Grievances Desk
- Grievances Management Committee at Villages, Sub County/ Town Council and District levels**.**
- Appeals Procedure.
- Communication protocols and Feedback**.**

Common Grievances in Construction Projects

- Considering the nature and extent of works on the roads rehabilitation, grievances may arise especially during the construction phase of the project and these include;
- Land requirements especially where a realignment is sought, alternative access where a road has been closed due to ongoing works like on a swamp or river crossing, workers camp and material storage areas
- Clearance of right of way which may affect crops and trees
- Temporary displacement of road side activities in urban centers, including vendors
- Complaints related to noise, dust, and traffic incidents
- Complaints on workers behavior or conduct, specially towards women, youg girls and children
- Illicit behaviors like alcoholism, smoking, drug abuse etc of the contractor's workers
- Disruption of social set up and security

- Disputes on compensation values
- Increased pressure on social services and infrastructure, including water supply
- Contractor failure to pay workers and suppliers
- Accidents arising out of contractor's negligence to provide necessary information, protective gears and supervision

8.0 Complaints and Grievances Desk

This will be the secretariat for grievances management hosted within the Sub County CDO and District CDO. This will be dedicated office assigned the responsibility of receiving, registering, and screening, assessing and following up complaints and grievances to their conclusion.

The Sub County CDO and DCDO will be the Grievances Officers and will be the secretaries to the Sub County/ Town Council and District Grievances management committees respectively.

Specific capacity building will be delivered by the MLHUD to these secretariats to ensure that they perform their roles effectively.

9.0 The Grievance Management Committees (GMC)

Dedicated Grievance Committees will be established to manage grievances during project implementation. The committees will be set up in a manner that brings political leadership and technical teams so that any resultant agreements are politically acceptable and technically compliant. The grievances management committees shall be formed at sub county, Town council, District levels and MLHUD level.

9.1 Village Grievance Management Committees

In each of the village where the roads transverse, there will be a grievance management committee comprising of the Chairperson LCI, representative of the Supervising Consultant, representative from Project Affected Persons, Women Representative and an Elder. This committee shall be chaired by the LC I chairman and the Supervising Consultant will be the Secretary.

9.2 GMC at Sub County Level

The committee will be formed at the sub-county level and its membership shall consist of;

- Local Council III (chairperson);
- The Sub County Chief,
- Community Development Officer (Secretary)
- Representatives of PAPs
- Parish Chief of the respective area where the complaint originated from.
- The LC III Chairperson shall be the Chairperson to the committee while the Sub County CDO shall be the Secretary to the Committee at Sub County Level.

GMC at Town Council Level

Given its extended nature of staffing and complexity, the town council grievance management committee shall include the following members;

- LC III Chairperson/ Mayor (Chairperson)
- Town Clerk
- Town Council Community Development Officer (Secretary)
- Town Agent where the grievances originated
- Representative of the PAPs

9.4 GMC at District Level

At the District Level, the Grievances Management Committee shall consist of;

- LC V Chairperson (Chairman)
- Deputy Chief Administrative Officer

- District Community Development Officer (Secretary)
- Representative from the PAPs
- District Lands officer

9.4 GMC at Ministry Level

At the Ministry of Lands Housing and Urban Development the Permanent Secretary shall take administrative charge of all referred complaints/grievances.

10.0 Project Affected Persons Representatives

The affected people or people within the Project Area within a Sub County shall be mobilized and sensitized on grievance redress mechanisms. They will then select a representative to the committee at Sub county Level or Town Council Level.

At a training of GMCs, the Sub County PAP representatives will select one representative to the District Grievance Management Committee.

11.0 Appointment of the Grievances Management Committees

Within the Local Governments, the Sub County Chief will oversee the selection of the Village Grievance Management Committees; the Chief Administrative Officer will formally appoint and institute the members on the District Grievances management Committee, Town Council Grievance Management Committee and Sub County Grievance Management Committees.

12.0 Capacity Building for the Grievances Management Committees

The MLHUD shall orient and train the committees in their responsibilities. In the execution of their responsibilities, the respective committees will seek support and advice from any other relevant official (s) from time to time depending on the matter being handled.

13.0 Appeals Procedure.

Where the complainant is dissatisfied with the outcome of the negotiation or implementation of agreed upon actions, he/she shall be advised to lodge an appeal to be handled at a higher level. This procedure shall be followed until all resolution levels are exhausted within the mechanism. An appeal shall not be accepted after the expiry of 14 days of formal communication of the decision to the complainant or their delegated representative/community leader. Appeals shall be made in the following ways;

14.0 Communication Protocols and Feedback.

The GO shall constitute the secretariat of the Grievance Resolution Mechanism. All decisions reached at the different resolution levels shall be communicated to the complainant and other stakeholders by the Chairperson of the respective Grievance Management Committee. It will be the responsibility of the GO to deliver the communications. Evidence of communication of decisions to complainants shall be acknowledged by way of signing a dispatch form or acknowledgement of a file copy.

The GO in consultation with the contractor and MLHUD shall develop a mechanism of informing all concerned parties of decisions and outcomes of all disputes resolved. This will apply especially where the grievance will be cross cutting to several people. Appropriate media shall be used for communicating in a language understood by majority of PAPs.

14.1 Receiving and Registering Complaints

Under this mechanism, complaints will be received from three principal sources:

- Directly from PAPs or other members of community who may not necessarily be PAPs including local councils.
- From the implementing teams of the project.
- From Government and Non-government officials like sociologists and environmentalists who will forward concerns identified in project affected areas.

The following procedure will be followed in registering a complaint

- A verbal or written complaint is logged in to the GO by either PAP, Community leader, project personnel or implementation team
- GO seeks clarification of specified details contained on grievance log sheet/ Grievances Register
- Complainant signs or puts initials on grievance log sheet
- Complaint is registered into the complaints register provided by MLHUD
- If complaint is not clearly understood, requires urgent attention, grave, fatal and/or bears serious implications, GO will visit site for on spot assessment and consultations upon which s/he will record the complaints.

14.2 Screening and Assessing Grievance by GO

The Grievances Officer at the Sub county/ Town Council will screen all complaints received to determine whether action can be taken at the level of his/her office in consultation with other responsible officials, project contractor and the complainant. If the complaint is resolved, the GO will thereafter bring the matter to the Chairman of the Grievance Management Committee (LC III chairperson) who will make a formal communication to the complainant clearly detailing the resolution and format of their implementation. Such complaints to be resolved at this level shall be acted on within a period not exceeding 30 days after logging the complaint/ grievance.

Where the complainant and the GO have resolved the complaint, the complainant shall then sign a consent form declaring his acceptance of agreed course of action and timeframe. The GO shall include a summary of such complaints in his/her monthly report presented to the GMC Chairperson and at site meetings where applicable shall be conducted to sensitize stakeholders on the complaints resolved.

Complaints rejected for whatever reason including but not limited to incomplete or faulty declarations, wrong information, complaints lying out of the project scope among others will be catalogued and decision arising thereof shall be communicated to complainant directly or through the local council structures. Should the complainant be dissatisfied with the decision, the GO will table the matter to the Grievances Management committee at the Sub county or Town Council for consideration.

14.3 Sub County and Town Council Grievances Management Committee

The GO shall present all unresolved grievances to the Sub county or Town Council Grievance grievances management committee for consideration. The committee shall hold monthly meetings to deliberate on complaints. Where the committee accepts the complaint, the Chairperson LC III will on behalf of the committee formally invite the complainant for a hearing with a notice of at least 7 days. The area LC I Chairperson of the village where the compliant was lodged will also be invited to attend together with the complainant. This is intended to ensure fairness and the LC I will be observing and making inquiries to ensure that both parties understand each other point of view. This will instill confidence to the complainant as well. The GO who will also be the Secretary shall track all the proceedings. Upon successful resolution, the

Chairperson of the Committee shall formally write to the complainant specifying details of actions, timeframes and any other details pertinent to the resolution.

On agreeing to the resolution, the complainant will sign a consent form binding him/her to the negotiated resolutions.

14.4 District Grievance Management Committees

If the Sub county/ Town Council Grievance Management committee fails to resolve the matter or if the complainant is not satisfied, the LC III Chairperson on behalf of the GMC shall refer the matter to the District Community Development Officer with the CAO in copy. The DCDO will register the referred case in the District Complaints Register that will be provided by MLHUD.

The DCDO who will also act as the Secretary to the DGMC will screen the matter referred and bring to the attention of the LC V chairperson who will write invite the complainant together with the respective LC I Chairperson to the DGMC with in fourteen days.

A fair hearing process will then commence at the DGMC and upon satisfaction of the resolutions/ agreement, the complainant shall sign the consent form and the LCV chairman shall officially write to the complainant with a copy to the LC III, Sub county Chief/ Town Clerk and the contractor.

If the matter cannot be resolved by the DGMC, then it will be referred to the Ministry of Lands Housing and Urban Development. The LC V Chairperson on behalf of the DGMC refers the case to the Permanent Secretary MLHUD with a copy to the ARSDP Coordinator MLHUD within 15 days.

The Complainant can also lodge an appeal to the PS MLHUD if s/he was not satisfied with the outcomes of the DGMC within 14 days.

14.5 MLHUD Grievances Management by the Permanent Secretary

At MLHUD, the Project Coordinator shall liaise with the project team to establish all necessary facts within 14 days upon receipt of the complaint. The Project Sociologist will spearhead the collection of preliminary information including conducting site visits with the support from relevant Ministry and Local government Officials.

A preliminary report shall be forwarded to the Project coordinator upon which basis shall be made for the Permanent Secretary to on any administrative way of managing the grievance.

Th complainant will be informed and invited to the MLHUD or the Ministry officials will engage the complainant at the district, Sub County or village/ site.

Upon arriving at an agreed understanding, the complainant shall sign a consent form witnessed by the area LC I Chairperson.

If no agreement is reached at this level, the complainant shall be advised or shall decide on his/ her own to use any other lawful arrangements as may be applicable.

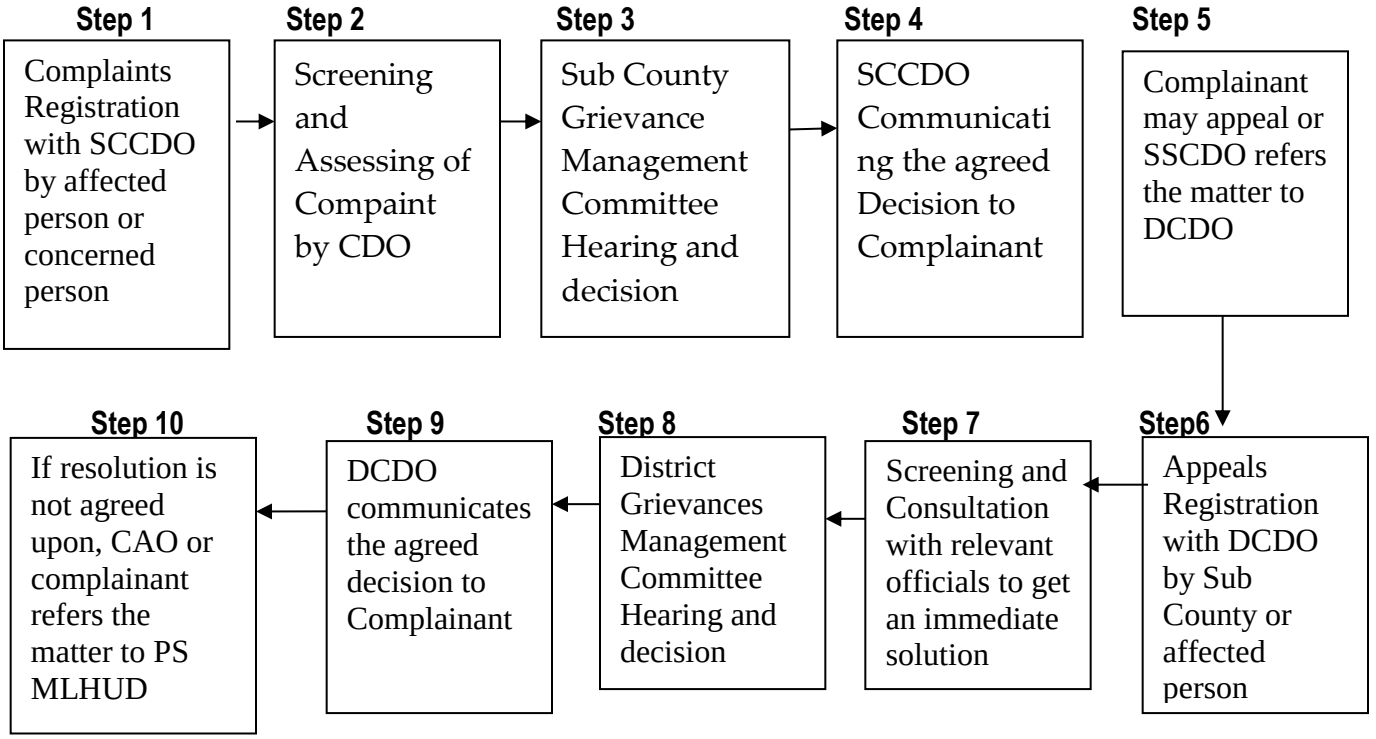
15.0 Implementation and Verification of Negotiated Corrective Actions

Agreed corrective action will be undertaken by the responsible agency/ part for example a Local government, MLHUD, contractor or authorized sub-contractors in close consultation with the complainant within the agreed timeframe and completed action recorded in the grievance database. To verify satisfaction, the Grievance

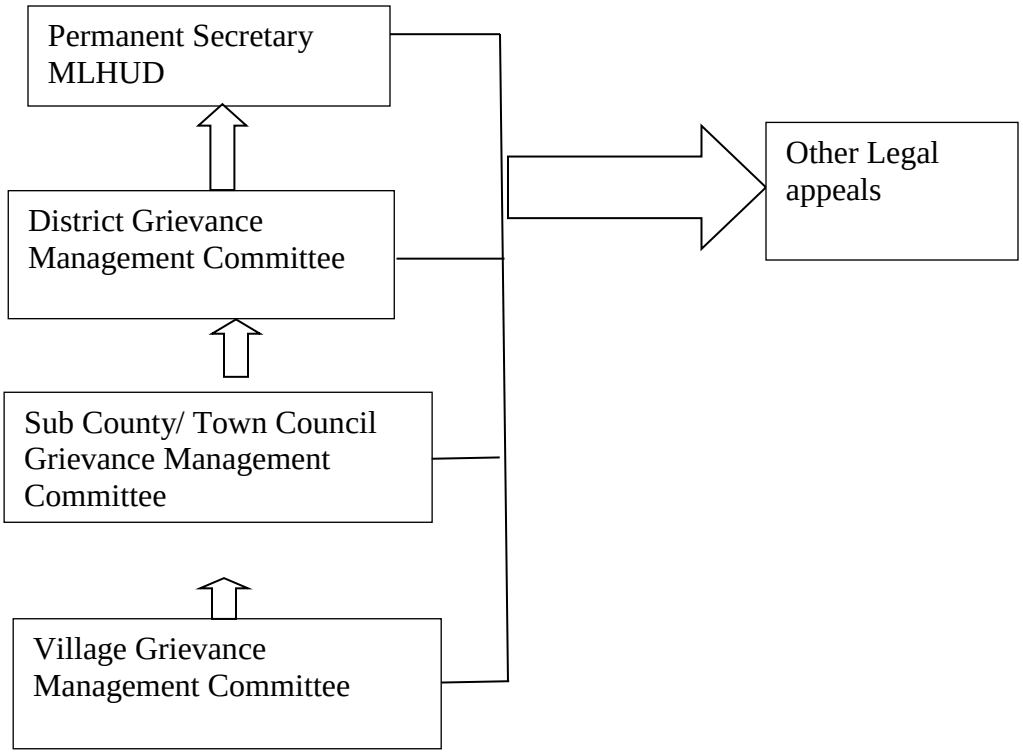
Committee will upon receipt of a completion report from the GO verify that corrective actions have been implemented. A signature of the complainant will be obtained on the consent form. If the complainant is not satisfied with the outcome of corrective action, additional steps may be undertaken to reach agreement or an appeal will be lodged by the complainant.

16.0 The Grievance Management Process

The grievance management process has several interdependent steps that will be followed. These include the following;



17.0 Flow of Appeals of Grievances



18.0 The Office of the Grievance Officer

Cognizant of the resource requirements, the existing GoU staffing shall be used and at Sub county/ Town council, the CDO shall be the GO, while DCDO shall be the GO at district level. The ARSDP Coordinator shall be the GO at MLHUD. The office of the Grievance Officer will be the de-facto secretariat of the Grievance Mechanism. Principal responsibilities of the GO will include:

- Receiving and screen grievances from affected people and organizations.
- Catalogue and develop a database of complaints received. This could be a manual log or an electronic data base. The created data base will be a 'living' document updated by the GO on a weekly basis. Confidentiality of information received from complainants will be maintained.
- Undertaking preliminary investigations to validate and authenticate the nature of complaints lodged.
- Initiate contact and arrange meetings with complainants
- Work with complainants, contractor and local authorities to resolve first level simple misunderstandings
- Schedule meetings of the Grievance Management Committee
- Serve as secretary to the Grievance Management Committee responsible for communicating all decisions of the committee to complainants, MLHUD and all concerned stakeholder.
- Report to the aggrieved parties about developments regarding their grievances and decisions taken.
- Submit monthly returns to MLHUD on the status of Grievances handled. This will be a comprehensive report categorizing and detailing complaints received, those resolved at the different levels, pending resolution and appeals.
- Lead sensitizations of PAPs and other stakeholders on the grievances procedures
- Providing inputs into the Monitoring and Evaluation process.
- Ensure safe custody of all records relating to management of grievances include registers, consent forms, minutes, among others.

18.1 Competencies and Capacity building of the GO

Where there are capacity issues, the priority will be given in building the GO in the following areas;

- Ability to communicate with PAPs in a language they understand
- Conflict management skills
- Basic computing skills
- Basic knowledge on archiving
- Community mobilization experiences
- Managerial competencies

19.0 Other Team Members

The tasks and roles of other members on the committee will be derived from their professional and institutional mandates.

For effective implementation of grievances redress, the committees shall work with different offices/ officials they deem fit to providing input in resolving the grievances.

20.0 Third Parties

For grievances that require third party agencies like NEMA, CGV, MoLG, and Solicitor General (SG) among others, it will be the responsibility of MLHUD project team to guide and engage the respective third parties.

However, within the Local Governments, certain matters which require existing agencies involvement like security agencies, traditional institutions, etc can be engaged by the respective LG under the guidance of the CAO.

21.0 Capacity Building Arrangements

It will be the responsibility of the MLHUD to coordinate and arrange for capacity building of the grievance committees. Local government administration shall have the responsibility of sensitizing and popularizing grievance redress arrangements to the local people and stakeholders.

The project Sociologist shall lead the rollout the capacity building framework and trainings to ensure the committees perform to the expectations of the stakeholders.

22.0 Monitoring and Evaluation

Complaints and grievances redress mechanism will be an integral part of the M&E framework of all the project activities including site visits, field visits and missions.

Review of minutes of the committees, communications on file, updated complaints and grievances register shall be among the verification modalities for the different stakeholders.

Beneficiary satisfaction surveys will also encompass the C&G mechanisms to assess the performance of the grievance redress mechanism of the project.

Monitoring and Evaluation Indicators shall among others include the following;

- No of GM Committees formed
- No of GM Committees trained
- No of C&G community sensitizations conducted
- No of people (M, F) sensitized
- No of C&G registered monthly
- Proportion of complaints resolved by GO
- Proportion of cases successfully managed by the GMC
- % of cases referred to higher committee
- % of cases appealed to other law enforcement agencies
- % of resources spent of C&G

Appendix ii: Grievances Register
(A2 Book Hardcover Bound 20 pages) Per Sub County, Town Council, District, MLHUD)

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project
Complaints and Grievances Register
Sub County/ Town council……..……District……..……

S/N	Date received	Complaint source Name	Sign of complainant	Zone and Parish	Contacts	Complaint Description	Compliant Category[1]	Outcome Sought	Action Taken	Satisfaction	Closure Date	Referral Date	Comments

Note: The complaints and grievances register should be able to provide the stakeholders with a record of the type of grievances and any trends, effectiveness of resolution strategies, and risk mitigation measure implemented in the Complaints and Grievances framework.

[1] L= Land, H= Health and Safety, E= Employment, C= Cultural, LL= Loss of Livelihood, EV= Environment, GBV=Gender Based Violence, VAC= Violence Against Children, SH= Sexual Harassment/ Defilement, T= Theft

Appendix iii: Grievances Referral Form

(A4 perforated/carbonated papers in triplicate Book of 50 pages) One book per village, Sub County, Town Council, District, and MLHUD)

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

Grievances Referral Form

Sub County/ Town council……..……District……..…… **Serial No: ..**

Referral Date: _____

Name of Complainant		**Gender**		**Age**
Village/Zone of Residence		**Parish/ Ward**		**Telephone Contact**
Date Registered		**Registration Number**		
Description of the Grievance:				
Summary of the Committee Decision (quote the minute reference):				
Reasons for Referral:				
Recommendations from the Committee:				

Prepared by Secretary: **Name:** **Signature:** **Date:**	**Approved by Chairperson** **Name:** **Signature:** **Date:** ***Official Stamp***

Appendix iv: Invitation Notice for Grievance Hearing Meeting
(A4, perforated triplicates, 50 pages booklet) for each Sub County/ Town Council/ District/ MLHUD)

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project
Invitation to the Grievance Hearing Meeting
Sub County/ Town council……..……District……..…… Serial No: ..

To: _____ (Name of Complainant) of _____ Village,
_____ Parish/ Ward, _____Sub County/ Town Council,
_____District.
Re: Invitation for a Grievance Hearing Meeting
Arising out of Grievance Number_____ regarding _____
_____(Description of the grievance)
received on this date_____.
The Grievance Management Committee is set to hear your grievance(s) on the _____ (Date)
at _____ (Time) at the _____
_____so that an amicable solution is reached.
Endeavor to come in person, with your area LC I Chairperson and keep time.
Yours;
Name:
Signature:
Chairperson Grievance Management Committee
Buliisa District
Official Stamp
Original to be served to complainant. Copy 1 to be served to LC I Chairperson. Copy 2= File

APPENDIX 9.1: PROJECT COORDINATION COMMITTEE GUIDELINES

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

GUIDELINES FOR THE FORMATION AND OPERATION OF PROJECT COORDINATION AND USERS COMMITTEES

July 5, 2017

List of Abbreviations

ARSDP	Albertine Region Sustainable Development Project
BTVET	Business Technical and Vocational Education and Training
CAO	Chief Administrative Officer
DCC	District Coordination Committee
DCDO	District Community Development officer
DE	District Engineer
DEO	District Environment Officer
DFO	District Fisheries Officer
DLG	District Local Government
DPO	District Production Officer
MDA	Ministry Departments and Agencies
MLHUD	Ministry of Lands, Housing and Urban development
PP	Physical Planner
SC	Sub County
SCCC	Sub county coordination Committee
TC	Town Council
TCCC	Town Council Coordination Committee
UNRA	Uganda National Roads Authority

1.1 Introduction

The Government of Uganda with support from the World Bank (IDA) is implementing the Albertine Region Sustainable Development Project (ARSDP) to facilitate a more orderly, sustainable and inclusive transformation of the Albertine Region and improve the local infrastructure and connectivity for rural communities. The overall objective of the project is to improve regional and local access to infrastructure, markets, and skills development in the Albertine Region. The project commenced in December 2015 and will close in July 2019.

1.2 Components of the Project

The project has three major components being implemented by different MDAs which include;

Component 1: Regional Access and Connectivity

This component is implemented by Uganda National Roads Authority**.** This component aims at improving overall accessibility to the Albertine region, reduce travel times and improve access to markets and services. It will focus on upgrading of Kyenjojo-Kabwoya-Buliisa-Kigumba Road to a paved Class II (bitumen) standard.

Component 2 : Local access, Planning and Development

This is implemented by Ministry of Lands, Housing and Urban Development. It aims at increasing rural accessibility to markets and services prepare selected key urban centers for growth and provide economic infrastructure targeting key sectors in the region

Component 3: Skills Access and Upgrading

This component is implemented by Ministry of Education and Sports. This component is designed to upgrade BTVET quality in oil and gas, orient it to the private sector demands and provide access to Business Technical Vocational Education and Training (BTVET) to the people living in the Albertine Region.

1.3 Implementation of Component 2 of ARSDP

The Ministry of Lands Housing and Urban Development is responsible for implementing Component 2 of the project focusing on physical planning and local infrastructure development through rehabilitation of rural roads and construction of local economic infrastructure in the 3 Local Governments of Hoima District, Buliisa District and Buliisa Town Council.

1.3.1 Physical Planning

The Physical Planning Subcomponent is funding preparation of Physical Development Plans for nine growth centres – two of these in Buliisa District and eight in Hoima District. These are;

District	Centre
Buliisa	Wanseko
	Biiso
Hoima	Kigorobya Town Council
	Butema
	Kiziranfumbi
	Kabwooya
	Kyarusesa
	Kyangwali
	Buhuka

1.3.2 Local Access and Economic Infrastructure:

This sub-component seeks to augment the intentions of the first subcomponent by improving accessibility between agricultural production areas and growth centres. It will improve exiting district and Town Council roads to motorable status all year round by eliminating bottlenecks on accessibility. It will also provide space for sell of produce and other products and facilitate a whole host of socioeconomic activities.

Buliisa District Local Government – Roads to be improved

SN	PROJECT NAME	LENGTH (km)	REMARKS
Gravel Roads			
1	Kisiabi - Kabolwa	9.8	Major link to School and Landing site
2	Karakaba -Kigoya TC	3.15	New road, Community Access road
3	Kisiabi TC - Buliisa Auction Market	3.9	New road
4	Buliisa – Bugana	10.8	Rehab road
5	Kibukwa - Bugana Main	2.15	New road, shortcut to Bugana main
6	Auction Mkt - Kakindo – Kilama	8.4	Major link to Social Services
7	Wanseko – Ngwedo	21.3	Rehab road

8	Kisomere - Nuel Camp	3.45	Tourists link road
9	Ngwedo -Ndandamire – Bikongoro	10.7	Major link to Social Services
10	Bikongoro - Kisansya TC	2.45	New road
11	Bugoigo – Sonsio	4.65	Has a section for new opening
12	Bugoigo HC - Daily Mkt – Main	1.4	Market Access
13	Kamagongoro – Main	1.5	New road
14	Sseseko - Kawaibanda	3.65	Rehab road
15	Magali	0.75	Rehab road
16	Biiso Waaki	8.5	Rehab road
17	Nyamasoga - Tangala TC	5.3	New road, has many segments
	Total Length	101.85	
	MARKETS		
1	Wanseko		General market
2	Butiaba		Market for food staffs & fish
3	Biiso		Market for food staffs
4	Walukuba		General market
5	Ngwedo		Market for food staffs and fish
6	Bugoigo		Market for fish
	Office Renovations		
1	Minor Renovation of Buliisa DLG offices		

Hoima District Local Government – Roads to be improved

SN	PROJECT NAME	LENGTH	REMARKS
Gravel Roads			
1	Kihombya - Kyarubanga – Bukerenge	10.6	Major link to Kaiso road
2	Bujawe - Kasenyi – Nyakabingo	11.5	Crescent road links to Kaiso
3	Kiboirya - Iseisa –Buhamba	12.5	Rehab road
4	Kitoba - Icukira – Kigorobya	11.2	Rehab road

SN	PROJECT NAME	LENGTH	REMARKS
5	Kapapi – Runga	8.5	Has new road section through the escarpment
6	Kitoba - Kyabasengya - Kaboijana road	14.75	Rehab road
7	Waki-Kiryabutuzi-Mparangasi	16.2	Rehab road
8	Kyakapeya - Kisiita – Kibaire	15.4	Rehab road
9	Bulindi - Dwooli – Kibanjwa	28	Has a series of segments
10	Kafo - Kasambya – Wagesa	9.6	Requires rehab of entire road
11	Kinogozi - Kihabweni – Kigaya	13.95	Rehab road
12	Kabanyansi – Musaijamukuru	12.4	Has two new road segments
13	Kigaya - Kitindura – Kikuube	14.85	Rehab road
14	Kiziranfumbi - Kichakanya – Ruhunga	16.6	Rehab road
15	Kihooko - Kimegere – Katooke	9.75	Rehab road
16	Hohwa - Kyaruseisa – Butoole	26	Rehab road
17	Bukinda – Nguse	5.2	New road
18	Kyangwali - Tontema – Mahamba	7.3	Has new road section through a swamp
	Total Length	**244.3**	
Economic Infrastructure to be constructed/provided			
1	25 Fishcages		Sites located atLake Albertshores
2	Buhuka		Fishlandingsite and storage
3	Runga		Fishlandingsite and storage
4	Kigorobya		Market-General
5	Kyangwali		Market for food staffs and clothes
6	Kabale		Market for food staffs
7	Buhuka		Market for food staffs
8	Buseruka		Animal Slaughter House

Buliisa Town Council

SN	PROJECT NAME	LENGTH	REMARKS
	Gravel Roads		
1	Etambiro	0.9	Connectivity within Buliisa TC
2	Kaliisa	0.9	Connectivity within Buliisa TC
3	Pamba	0.95	Connectivity within Buliisa TC
4	Kalolo	1	Connectivity within Buliisa TC
5	Kitahura	2.9	Connectivity within Buliisa TC
	Total	**6.65**	
Roads for Upgrade to Tarmac			
1	Gongo	1.25	Connectivity within Buliisa TC
2	Commercial	0.95	Connectivity within Buliisa TC
3	Muhoojo	1.57	Connectivity within Buliisa TC
4	Speke	0.40	Connectivity within Buliisa TC
5	White	0.80	Connectivity within Buliisa TC
6	Galende	0.60	Connectivity within Buliisa TC
7	Bugana	0.85	Connectivity within Buliisa TC
8	Mukitale	0.70	Connectivity within Buliisa TC
9	Kalolo	0.50	Connectivity within Buliisa TC
10	Kyamurwa	0.45	Connectivity within Buliisa TC
11	Mutiti	0.30	Connectivity within Buliisa TC
12	Rift Valley	0.20	Connectivity within Buliisa TC
13	Siira	0.50	Connectivity within Buliisa TC
14	Baker	0.45	Connectivity within Buliisa TC
15	Wangalia	0.55	Connectivity within Buliisa TC
16	Magali	0.75	Butiaba Port (Town Board)
17	Access to the Marine & Butiaba Fish Landing Site	0.25	Butiaba Port (Town Board)
18	Part of Sseseko – Kawaibanda	0.8	Butiaba Port (Town Board)
19	Access to Health Centre	0.2	Butiaba Port (Town Board)
	Total	**12.07**	

SN	PROJECT NAME	LENGTH	REMARKS
Markets			
1	Central		**General Market**
2	Kalakaba		**General Market**
3	Kalolo		**General Market**
	Office Renovations		
1	Renovation of Buliisa TC offices		

These sub projects were selected based on their consistency with Local Governments' Development Priorities, ability to create employments, and complementarity with other projects.

2.0 Background to Project Coordination and User Committees

2.1 Introduction

In order to implement component 2, MLHUD will support the formation and training of project different committees from local level, through the Sub County/ Town Council up to the District levels. These committees will support participatory project implementation, monitoring and evaluation.

It should be stressed that these committees will be formed only where statutory structures or committees are nonexistent or non-functional to avoid any duplication. Where there are functional committees already in place, the project will adopt them so that they should takethe new project roles and responsibilities. At the District, Town Council and Sub County levels, the committees will be functional teams formed to support project implementation in light of the mandates of the Local Governments as stipulated in the Schedule (Parts 2 to 5) of the Local Governments Act, CAP 243

These guidelines have been formulated to streamline the formation and operation of the Project Coordination and User Committees for ARSD participating local governments. Upon their formation, MLHUD will ensure that the committees are well trained in these guidelines. More targeted capacity building of the project committees will be conducted to strengthen the operation and performance of these committees at different levels.

2.2 Purpose of the Guidelines

The purpose of these guidelines is to harmonize the formation, training and operationalization of the project coordination through a well-structured framework within the project implementing Local Governments.

2.2 Specific Objectives

To clarify on the need for project committees at different levels of project implementation

To guide the formation, structure, composition and operation of these committees

To explain the key roles and responsibilities of the committees before, during and after project implementation

2.3 Justification of the Project Coordination Committees

Section 2.1 of the ARSD Project Operations Manual (POM) provides that the staff of the participating LGs will be facilitated to provide the necessary requisite oversight support and monitoring of the project. Project Coordination Committees will be one of the institutionalized frameworks in which LGs and project beneficiaries will monitor ARSDP implementation. It is an approach that is premised on the participatory approaches and ownership strengthening of the project by the districts, sub counties and communities (beneficiaries). Benefiting districts are not mere recipients but rather active players with capacity to plan, implement and monitor the project initiatives. The committees at different levels shall play pivotal role on behalf of the Local Governments and MLHUD to monitor and implement key initiatives that address potential risks to project success.

3. Project Coordination Structure

3.1 District Level Coordination

The staffing levels in the participating districts present an opportunity for the Ministry to tap and utilize diverse skills and expertise in implementing infrastructure and physical planning activities. Key departments including office of the Chief Administrative Officer (CAO), District Engineer (DE), Environment Officer (DEO), Production Officer (PO), Fisheries Officer (FO), Community Development Officer (CDO), Physical Planner are among others that will form part and parcel of the District Coordination Committees (DCCs). Therefore, the different technical officers will support the project in their respective mandates under the coordination and leadership of the CAO.

3.2 Sub County/ Town Council Level Coordination

As a Lower Local Government (LLG), the sub county is the gateway to the community. Service delivery mechanism ought to be channeled through the Sub County for proper monitoring and accountability. The staffing level at the Sub County offers a good avenue to utilize the existing skills and experience in community mobilization and engagement. It should be noted that Sub County / Town Council staff spend most of their time with the communities and are therefore well conversant with the affairs of the locality. Therefore, the

Sub County Chief (Senior Assistant Secretary), Community Development Officer, Health Inspector/ Health Assistant will form the Sub county/ Town Council Coordination Committee. The Town Council will include the Town Clerk, Town Engineer, Environmental Officer, Physical Planner and CDO. The SAS and TC will. be the chairperson of the coordination committees at Sub county and Town Councils respectively.

3.3 Community Level Coordination

The community is the ultimate beneficiary of the physical planning, road network and economic infrastructures like markets, fishing cages, slaughter houses or abattoirs. Therefore they have a great role to play before, during and after implementation of these projects. They will be organized into user committees. It is envisaged that some of the economic infrastructure have such committees like in markets, abattoirs, landing sites. The project will continue to work with such existing committees. They will be oriented and trained to take on the project required functions to avoid duplication. User committees are expected to be the focal unit of contact with the beneficiaries, monitor the progress of the project, and will play role in detecting and management of complaints at the community level.

4.0 Committees Composition

4.1 Introduction

The composition/ membership of the different committees shall reflect the complexities and mandates of the different established offices in light of the mandate and technical jurisdiction. The Chief Administrative Officer shall ensure that there are representation of men and women on such committees. The composition of these committees shall be as follows;

4.2 District Coordination Committees

- Membership of these committees should include;
- ChiefAdministrative Officer- Chairperson of the Committee
- District Engineer- Secretary to the Committee
- District Engineer (DE),
- District Environment Officer (DEO),
- District Production Officer (DPO),
- District Fisheries Officer (DFO),
- Community Development Officer (DCDO),
- Physical Planner (PP)
- District Lands Officer

The quorum for the DCC meeting should be at least four people.

4.3 Sub County Coordination Committees (SCC)

The membership to these committees shall include the following;

- Sub County Chief- Chairperson to the committee
- Community Development Officer-Secretary to the committee)
- Health Assistant- Member
- Parish Chiefs of the benefiting Parishes- Member
- Production Officer- Member

The Quorum for the SCC meeting shall be at least 3 people.

4.3 Town Council Coordination Committee (TCCC)

The Town Council Coordination committee shall consist of the following membership;

- Town Clerk- Chairperson of the committee
- Town Engineer- Secretary to the committee
- Environmental Officer
- Physical Planner
- Community Development Officer
- Commercial Officer

The Quorum for TCCC shall be at least 5 people.

4.4 Project User Committees

User committees shall constitute themselves into;

- Chairperson
- Vice Chairperson
- Secretary
- Members (3-5) including a youth
- At least 2 members should be female.

The quorum for user committees shall be at least 5 people.

4.4.1 Qualities of user committee members

- Hard working
- Trust worthy
- Known resident in the area for at least 3 years for roads committees

- For Markets, abattoirs and fish cages (Landing sites), S/he should be a known and registered member of the market, abattoir, and fish landing site
- Above 18 years of age
- Ability to read and write
- Has no criminal record

4.4.1 Appointment of the User Committee members

The users of the project/ infrastructure shall be organized to select their leaders (if they are not already in existence). The selection process shall be overseen by the Sub County Chief/ Town Clerk through a voting exercise**.** The voting shall be democratic and may be through any form that members have agreed to.

4.4.5 Removal of a member from the User Committee

A member may be removed from the user committee on the following grounds;

- Abuse of office
- Migrating from the parish in which the project is located
- Mental illness
- Failure to perform his/ her duties
- Conviction of criminal offense
- Failure to attend at least 3 consecutive meetings without reasonable cause communicated to members
- Breach of lawful order from Government
- A person shall be removed from the committee by;
- Vote of no confidence by at least 50% of the members of the committee
- Petition by the users to the Sub County Chief/ Town Clerk to remove the member of the user committee

Where the Sub county Chief/ Town Clerk is convinced that there are sufficient evidence and reasons for the members to leave the committee and upon giving affected person an opportunity to be heard, formal removal notice shall be written to the affected member to vacate the committee. A fresh selection of a new member shall be conducted immediately.

5.0 Roles of Coordination Committee Members

The committee members at all different levels shall have a number of roles including the following;

5.1 Responsibilities of the Chairperson

- Calling meetings of the committee
- Preparing the agenda of committee meetings
- Guiding and settling disputes among committee members on their roles and responsibilities
- Chairing all committee meetings
- Sharing responsibilities to the committee members
- Ensuring that committee resolutions are implemented in consultation with the different offices/ departments
- Ensuring that reports are submitted in time

5.2 Responsibilities of the Vice Chairperson

Deputizes the role of the Chairperson above if the chairperson is absent or if s/he has been delegated by the Chairperson

Advises the Chairperson on matters concerning the running of the committee from time to time

5.3 Responsibilities of the Secretary

- Writing committee minutes
- Writing invitation letters
- Writing reports for the committee
- Keeping all records
- Any other duty that the committee can decide/ or agree to.

5.4 Responsibilities of the Committee Members

- Carrying out any duty as assigned by the chairperson or committee
- Attending all meetings
- Guiding appropriately the chairperson and committee on matters to be implemented by the committee

6.0 Key Performance Areas for the Project Coordination Committees

The performance areas for the Coordination committees will differ depending on the level, membership and projects being implemented. However, the major deliverables for the committees shall include the following;

6.1 District Coordination Committees

The District Coordination committees (DCC) will be the main working committee form ARSDP and shall form the project support functions within their respective districts. The multi-departmental composition of this

committee makes it in better position to plan, support, supervise and report any outstanding issue on roads improvement and construction of economic infrastructure as identified by ARSD project component 2.

The following are the specific performance areas for DCCs.

- Implementing community and other stakeholder's mobilization, engagements and sensitizations on the project activities.
- Securing right of way terms of providing the land for the roads to be improved. It is cognizant that the roads to be improved have been and will continue to be district roads and therefore the road corridors shall be fully secured by the District through the District Coordination Committees.
- In liaison with MLHUD, implement Resettlement Action Plan and minimize RAP costs.
- Support the district to secure land for all economic infrastructure including markets, abattoirs and fish cages for construction to commence.
- Support the monitoring of contractors during roads design, feasibility studies, Environmental and Social Impact Studies of the project.
- Participate in the monitoring of consultants during the construction of roads and economic infrastructure.
- Lead the implementation, monitoring and reporting of Environment risks and other issues related to the implementation of the project in collaboration with MLHUD.
- Support the implementation of Social safeguards to the project in liaison with MLHUD.
- Lead the implementation of Grievance redress system in the Sub Counties/ Town Councils and District Levels in accordance with the guidelines provided by the MLHUD.
- Identify capacity building gaps and recommend to the MLHUD as well as MoLG for appropriate capacity enhancement initiatives.
- Initiate projects sustainability strategies including maintenance and operation plans ensuring that they are approved within the districts and submitted to MoLHUD.
- Organize monthly meetings to review progress, and action plans for the smooth running of the project
- Share Monthly minutes with the ARSDP Coordinator for follow up and support from the project
- Submit Quarterly reports to the Permanent Secretary MLHUD on the progress of the project in the district
- Attend to any other project activity (ies) that may be incidental before, during and after implementation.
    - Sub County/ Town council Coordination Committees

- The Sub County and Town Council coordination committees shall be the focal points or secretariats of the project within the Sub Counties and Town Councils respectively. They will be charged with the responsibility of coordinating the implementation, reporting and follow-up on matters relating to the projects within their respective areas of jurisdiction.
- The specific roles of the Sub county and Town council Coordination Committees shall include among others;
- Sensitizing the Sub County Councils and Town Councils on matters relating to the project
- Mobilizing the community for meetings in relation to the project
- Ensuring that the operators in the proposed economic infrastructures like markets, fish cages, abattoirs, etc are duly registered
- Supporting the district in securing right of way for all project activities
- Participating in Resettlement Action Plan
- Implementing grievance redress mechanism from the project sites to Sub County/ Town Council and implementing referral system to the districts where applicable.
- Reporting any social safeguard risks during project implementation
- Reporting any environmental issues during and after construction
- Supporting the setting up, training and supervising of the user committees during and after construction
- Conducting monthly meetings to review progress of the projects and onward submission of reports to the Chief Administrative Officer
- Submit monthly reports to CAO for further incorporation into the district quarterly report
- Perform any other project related activity (ies) assigned by the DCC

6.3 User Committees

The roles of the user committees shall vary depending on the nature of economic activities carried out. They will include the following;

6.3.1 Responsibilities of Market User Committees

- Maintaining up to date register of all members of the market
- Mobilizing market venders for meetings from time to time
- Coordinating with the Sub County to relocate the market operations before commencement of the construction of the market infrastructure

- Report any grievances to the Community Development Officer for action and follow up
- Under the guidance of the Government officials, to allocate market stalls and lockups to the members
- Reporting tothe Parish Chief/ Town Agent/ Sub County or Town Clerk any health and safety problems or risks in the market
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any environmental issues arising out of the construction of the market for follow up
- Mobilizing market venders to participate in the hygiene and sanitation of the market
- Maintaining the market for example ensuring minor repairs are done, doors fixed etc
- Enforcing order in the market area for example through having bylaws for the market
- Organizing monthly committee meetings to review progress and issues emerging during construction of the market
- Ensuring security of the construction materials during the project implementation
- Submitting reports to the Sub county Chief/ Town Clerk through the Parish Chief/ Town Agent using the report formats provided by Government officials

6.3.2 Responsibilities of Road User Committees

- Mobilizing local residents for meetings in collaboration with the Government Officials
- Reporting any grievances to the Community Development Officer during construction of the roads
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any health and safety problems or risks on the respective roads during and after construction
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any environmental issues arising out of the construction of the roads for follow up
- Liaising with local leaders to ensure security of the construction materials during the project implementation
- Mobilizing local residents to clean the road during and after construction in collaboration with the local leaders

6.3.3 Responsibilities of Abattoirs User Committees

- Maintaining up to date register of all members of the abattoir
- Mobilizing members of the abattoir for meetings from time to time

- Coordinating with the Sub County to relocate the abattoir operations before commencement of the construction of the infrastructure
- Report any grievances to the Community Development Officer for action and follow up
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any health and safety problems or risks in the abattoir
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any environmental issues arising out of the construction of the abattoir for follow up
- Mobilizing members to participate in the hygiene and sanitation of the abattoir
- Maintaining the abattoir for example ensuring minor repairs are done, doors fixed etc
- Enforcing order in the abattoir area for example through having bylaws
- Organizing monthly committee meetings to review progress and issues emerging during construction of the abattoir
- Ensuring security of the construction materials during the project implementation
- Submitting reports to the Sub county Chief/ Town Clerk through the Parish Chief/ Town Agent using the report formats provided by Government officials

6.3.4 Fish Landing Sites and cages Committees

- Maintaining up to date register of all members of the fish landing site
- Mobilizing members of the fish landing site for meetings from time to time
- Coordinating with the Sub County to relocate the abattoir operations before commencement of the construction of the infrastructure
- Report any grievances to the Community Development Officer for action and follow up
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any health and safety problems or risks in the fish landing site
- Reporting to the Parish Chief/ Town Agent/ Sub County or Town Clerk any environmental issues arising out of the construction of the fish landing site for follow up
- Mobilizing members to participate in the hygiene and sanitation of the fish landing site
- Maintaining the fish landing site for example ensuring minor repairs are done, doors fixed etc
- Enforcing order in the fish landing site area for example through having bylaws
- Organizing monthly committee meetings to review progress and issues emerging during construction of the fish landing site

- Ensuring security of the construction materials during the project implementation
- Submitting reports to the Sub county Chief/ Town Clerk through the Parish Chief/ Town Agent using the report formats provided by Government officials

7.0 Financing the Project Coordination Committees

All coordination committees at different levels shall be voluntary committees. It is among the reasons that deliberate efforts will be taken to use the existing committees. It is believed that the adopted members already exist within the respective Districts, Sub Counties, Town Councils, Parishes and Villages.

At District level however, the project will provide quarterly funds to support fuel and travel costs, refreshments during field work, stationary and communication related costs to ensure that field monitoring of the project activities progress well. The district quarterly plans should incorporate the Sub County and Town Council plans so that any resultant costs at Sub County and Town Council level are catered for.

Any committees or members participating in the activities initiated by the MLHUD, the Ministry shall provide the respective facilitation in terms of transport refunds, meals, and refreshments accordingly.

Note: All user committees shall be purely voluntary since they are beneficiaries of the economic infrastructure improvement.

8.0 Committee Meetings

All committees shall have meetings on a monthly basis to review the progress, issues arising and actions to undertake to improve project performance.

The Agenda of the meeting shall be drafted by the Chairperson of the committee and for each meeting the following items shall be part;

- Opening Prayer
- Communication from the Chairperson
- Review of previous minutes and status of previous action points
- Project Implementation status: Issues arising
- New Action Plans for the Month
- The Secretary to the committee shall give a notice of the meeting with the agenda of at least 5 days to ensure popular participation of the members. The notice may be in writing, verbal through a phone call, message.

8.1 Committee Minutes

The Secretary shall ensure that all confirmed minutes are signed off by the Secretary and the Chairperson.

Minutes shall be properly filed and kept safely for any further review and follow up.

And as already noted, for proper implementation and follow up, copies of the minutes of the District Coordination committee shall be shared with the ARSDP Project Coordinator in either hard or soft copy.

The Sub County and Town Council coordination committee minutes shall be shared with the CAO for further follow up and support.

The user committee minutes shall on the other hand be shared with the Sub County/ Town Clerk through the Parish Chief/ Town agent respectively.

13.0 Reporting Structure for the Committees

All reports from the committee shall be submitted by the Chairperson on behalf of the Committee.

The user committee shall report to the Sub County Chief/ Town Clerk through the Parish Chief/ Town Agent.

The Town Agent/ Parish chief shall as part of his/ her work conduct routine supervision and collect all reports and sign in the minute books of the user committee.

The Sub County/ Town council coordination report shall be submitted by the Sub County Chief/ Town Clerk on behalf of the Committee to the Chief Administrative Officer.

The CAO shall on behalf of the District Coordination Committee submit reports to the Permanent Secretary MLHUD.

And any feedback from the MLHUD shall be handled by the Project Support Team led by the Project Coordinator.

NOTE:

The respective committees can make ad hoc meetings and reports on matters that are urgent and important for the smooth running of the project activities. And under such, the respective receiving officer shall treat such a report with the same urgency.

Appendix i: *Sub County/ Town Council/ District Coordination Committee Report Format*

Section A: Background Information

PROJECT NAME	Albertine Region Sustainable Development Project (ARSDP)
PROJECT IMPLEMENTATION STATUS	
IMPLEMENTING MINISTRY	Ministry of Lands, Housing and Urban Development (MLHUD)
AUTHOR (S)	(Name, and Position
NAME OF SUB COUNTY/ TOWN COUNCIL/ DISTRICT	
DATE OF SUBMISSION	

Section B: Overall Quarterly Achievements

Planned Activity	**Monitoring Indicator**	**Target**	**Achieved**	**Comment**

Section C:Key Project Successes during the Quarter

Key Successes Registered	**Description of the key successes registered and enabling factors**

Section D: Unexpected Events during the Quarter

Event	**Impact on the project progress**	**Action Taken**

Section E: Lessons Learnt during the Quarter

Lesson	**Recommendation**

Section F: Planned Activities for Next Quarter

Planned Activity	Monitoring Indicator	Target	Date of Implementation	Activity Budget	Responsible officer (Name, Position and Contacts)

Report Checklist for the Quarter

Is a copy of the approved monthly plan attached?

Is a copy of the approved budget attached?

Were all planned activities implemented?

Were there reallocations of expenditure from planned activities?

Were the reallocations approved?

Are all accountabilities fully attached?

What improvement is recommended for next quarter?

Appendix ii: Monitoring Tools for Health, Safety, Social and Environment Compliance (For Ministry, District Coordination Committees, Sub County/ Town Council Coordination Committees)

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
GoU/WB Albertine Region Sustainable Development Project
Health, Safety, Social, & Environment (HSSE) Compliance Monitoring Report No .....

Date……Site: ……Location:……Contractor……..……Consultant……
Site Manager (Name and Contact)……HSE Officer……..……Site Nurse……Doctor-on-Call……

No. of workers at site (A) Expatriates Total…… M…….…… F……(B) Nationals: Total…… M……F (include roles)……
Activities (i)…… (ii)……(iii)……(iv)……(v)……

Category	Parameter	Wght	Compliance(C/NC)[1]	Remarks/Timelines for Corrective Actions
Health	1.Doctor-on-Call-10	10		
	2.Presence of Site Nurse-10	10		
	3.Presence of HSE Officer-10	10		
	4.Quality Contraceptives-10	10		
	4b. HIV/AIDS Management Plan-10	10		
	5.HIV/AIDS Training (workers)-10	10		
	6.HIV/AIDS Training (communities)-10	10		
	6a. Voluntary Counseling and Testing (VCT) for workers	10		
	6b. Voluntary Counseling and Testing (VCT) for Communities	10		
	6c. Distribution of EIC materials on HIV/AIDS to workers	8		
	6d. Distribution of EIC materials on HIV/AIDS to Communities	8		
	7. Pre-employment screening-10	10		
	8.Pre-Assignment-10	10		
	9.Post-employment screening-10	10		
	10.Portable and accessible wholesome drinking water for workers -10	10		
	11.Safe meals for workers (quality and quantity, meal area, etc)	10		
	12. Site Clinic-10	10		
	13. Records of cases attended to in a Site Clinic (Work-related and general illnesses, segregated data for Workers and Communities)	10		
	14. Zero tolerance to Child Labour (18 and below)-10	10		
	14b. Zero tolerance to smoking at construction sites/camps	10		
	15. Zero Drug and Alcohol abuse	10		
	16. Zero Defilement-10	10		
	17.Zero Elopement -10	10		
	17b. Zero Sexual Harassment	10		
	18. Kitchen Inspection reports-9	9		
	19. Kitchen hygiene/sanitation (safety of cooking area, cleanliness, soot removal,…..)	8		
	20. Deworming of workers (records…..)	10		
	21. Potable water for Visitors-7	7		
	22. Safe meals for Visitors-10	10		
	23. First Aid Kit (stocked and accessible)-10	10		
	24. First Aid Contents checklist-9	9		
	25. Records of cases attended to by the First Aider (5W, 1H and Treatment)	8		
	26. Presence of Trained and available First Aiders per shift/gangs	10		
Safety	1.Personal Protective Equipment (PPE) for workers- (type, adequacy and appropriateness)	10		
	2.Personal Protective Equipment (PPE) for visitors-(type, adequacy and appropriateness)	9		
	3.Safety training for workers--(timing, adequacy and appropriateness)	10		
	4.Safety training for communities--(timing, adequacy and appropriateness)	9		
	5.Tool box talks --(daily, adequacy, participation and appropriateness)	10		
	6.Site emergency operational contacts (conspicuously displayed, accessible, legible)	8		
	7.High Way signages (conspicuously displayed, accessible, legible)	10		
	8.Site signages (conspicuously displayed, accessible, legible)	8		
	9.Visitors register (accessible, legible)	8		
	10.Askari/Security-trained and in uniform-10	10		
	11.Traffic guides/flag assistants (trained in safety, protected, visible,)	10		
	12.Speed limits (conspicuously displayed, accessible, legible)	10		
	13. Fire extinguishers (appropriate type, accessible, serviced, adequate)	10		
	14.Fire assembly points (accessible, legible, appropriate for the purpose)	9		
	15.Noise management (measurements, affected persons, protection and eng. controls)	9		
	15b.Site office/Workers' camp	10		
	16. Site/Store/Workers' camp Gate(guarded)	10		
	17. Camp/Store/Site Fence (appropriate)	10		
	18.Accident statistical analysis, trends-monthly)	9		
	19.Warning tapes at foundations (conspicuously displayed, accessible, legible)	8		

	20.Barricades at foundations (conspicuously displayed, accessible, legible)	10		
	20b. Zero Open Trenches/Ditches (appropriate)	9		
	21. Car parking area (accessible, legible, appropriate for the purpose)	9		
	22. Vehicles register (accessible, legible)	9		
	23. Vehicle First Aid Kits (stocked and accessible)-10	10		
	24. Servicing of vehicles (records)	10		
	25. Valid Drivers' Permits	10		
	25b. Contracts (signed) for PERMANENT/TECHNICAL workers- (persons hired for 4 months and above)	10		
	25c. Probation time (at most 6 months for PERMANENT/TECHNICAL staff)	9		
	25d. Contracts (signed) for CASUALI workers (persons hired for at most 4 months)	10		
	26. Payment of workers' wages-(records)	10		
	26b. Payment for Overtime-10	10		
	26c. Statutory remittance (NSSF) (availability of records)	10		
	26d. Statutory remittance (PAYE) (availability of records)	10		
	27. Community relations-(commendable public relation-confirm from community members)	10		
	28. Payment of Sub-contractors-(records)	10		
	29. Storage yard land payment (records)	10		
	30. Material storage (segregation, housekeeping, labeling and records/inventory management)	10		
	31. Rock blasting license (displayed, valid)	10		
	32. Rock blasting announcements-(timely, language, audible, accessible, records, relocation)	9		
	33. Rock Blasting Technician (competent, valid permit, PPE, medically certified)	10		
	33. Rock Blasting Assistants (competent, valid permit, PPE, medically certified)	10		
	34. Medical Waste Management Plan-10	10		
	35. Medical waste bins/Injection safety box (Pricks)-(appropriate, colour, size,)	10		
	36. Medical waste bins (Infectious) -(appropriate, colour, size, lining)	10		
	37. Medical waste bins (General)- -(appropriate, colour, size, lining)	10		
	38. Incineration of Medical Wastes-(records, photos)	10		
	39. Aviation Authority Permits-	10		
	40. Construction as per aviation clearances-9	9		
	41. Compliance with Security/Military Barracks conditions	10		
	42. Treatment of injured workers (records)	9		
	43. Compensation of workers injured/deceased injured at work (records)	10		
	44. Servicing of equipment-e.g Excavators, Piling equip (records)	9		
	45. Examination and Certification of statutory equipment by MGLSD (records)	9		
Environment	1.Mobile toilets/Latrines for Men-(adequacy, accessible, hygiene, privacy, PWD Access, hand washing basins)	10		
	2.Mobile toilets/Latrines for Women--(adequacy, accessible, hygiene, privacy, PWD Access, Foot Operated lined sanitary buckets, hand washing basins)	10		
	2b. Well-maintained Soak Pits	10		
	3.Bathrooms for Men -(adequacy, accessible, hygiene, privacy, PWD Access,)	9		
	4.Bathrooms for Women--(adequacy, accessible, hygiene, privacy, PWD Access,)	10		
	5.Environment management training for workers (signed records, photos, videos)	10		
	6.Environment management training for communities (signed records, photos, videos)	10		
	7. Avoidance of Mosquito and other vector breeding within site	10		
	8.Dustbins (plastics) (labeled, accessible, appropriate, size)	10		
	9.Dustbins (biodegradables)- (labeled, accessible, appropriate, size)	10		
	10.Dustbins (metals/glass)- (labeled, accessible, appropriate, size)	10		
	11.Temporal Waste Dumping site(s) (labeled, accessible, appropriate, size)	10		
	11d. Disposal of wastes (transportation, segregation, gazette dumping sites, etc)	10		
	12.Drainage channels (un clogged)	9		
	13.Restoration of vegetation-(better or to original state/maintain the indigenous flora)	10		
	14.Retainer walls (gradient, signage, activities above, as per soil tests)	7		
	15.Restoration of land scape -(better or to original state/maintain the indigenous flora)	10		
	16.Dust management (type of dust, timely sprinkling of water, control of traffic)	9		

	17. Submission of HSE management reports to MC (accurate, credible, consistent with indicators, concise, etc.)	10		
	19. Water Abstraction Permit-(records, displayed, valid)	10		
	20. Warning Letters (First) issued to Non-Compliant workers on HSE-9	9		
	20b. Warnings (Strict) issued to Non-Compliant workers-9	10		
	20c. Warnings (Very strict) issued to Non-Compliant workers-9	9		
	21.Oil spill management (containment, waste oil receptors, oil drums, fire protection)	10		
	22.NEMA Approval for storage yard (displayed, valid License)	10		
	23. Compliance with Wetland Permit Conditions-(displayed, valid License)	10		
	24. Compliance with Forest Permit Conditions-(displayed, valid License)	10		
	25. Compliance with Traffic Permit Conditions-(displayed, valid License)	9		
	27. Grievance Redress Committee (displayed names, valid contacts, accessible, democratically-elected workers' representatives)	10		
	28. Functional GRC Committee (minutes, quarterly consolidated reports)	9		
	29. District/Municipal Health Inspector's monthly reports for the Site-10	10		
	29b. District/Municipal Labour Officers' monthly reports for the Site-10	10		
	32. Water meters-(accessible)	9		
	33. Payments for water used at Sites-(records)	9		
	34. Submission of Water Abstraction reports	10		
	35. Sand mining License (displayed valid)	9		
	36. Community Engagement meetings	8		
	37. Re-use of construction waste materials e.g wood, steel	8		
	38. Proper disposal of NH construction waste materials e.g cement bags	10		
	39. Destruction Certificates for Hazardous construction waste materials e.g oil drums, oils,	10		
Gender & Culture	1. Employment of community members-9	9		
	1b. Employment of Women-9	9		
	2. Employment of the Elderly-9	9		
	3. PWD-friendly working environment-9	9		
	4. Employment of the PWDs-9	9		
	6. Cultural Resource Management Plan-10	10		
	7. Avoidance/relocation of cultural resources-9	9		
	8. Archeological finds reports-8	8		
	9. Avoidance of Vulgar language-10	10		
	10. Resting shades for workers	8		
	12. Changing rooms for workers (appropriate, space, separate by sex, privacy)	8		
	13. Workers' leave days (type, duration, wages,)	9		
	14. Maternity leave (duration, wages,)	10		
	15. Paternity leave (duration, wages,)	9		
	16. Activities for Work-life balance (games, sports, travels, etc)	10		
	17. Breast feeding mothers (shelters, breaks, appropriate meals, working hrs)	9		
	TOTAL SCORES	**1363**		

[2]Overall compliance (%)……..Attachments (attendance lists, permits, photos, etc)……

Recommendations (i)……
(ii)……
iii)……

Inspector/Monitor……Signature……..Date……

Appendix iii: Attendance Sheet during HSSE Compliance Monitoring

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
GoU/WB Albertine Region Sustainable Development Project

Health, Safety, Social, & Environment (HSE) Compliance Monitoring ATTENDANCE LIST….

Date……Site: ……Location:……

Contractor……..……Consultant…..……

Site Manager……HSE Officer……..……Site Nurse……Doctor-on-Call……..……

S.N	Name	Position, Institution	Telephone Contact	Signature
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Appendix iv: Report Formats for Project User Committees (Markets, Roads, Abattoirs, Fish Landing Site/ Fish Cages)

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project
User Committee Reports

Date……Name of Committee…… Zone/ Village: ……..…… Parish/ Ward……Sub County/ Town council……..……District……..……

Number of User members	Male	Female	Total	Number members who are Persons with Disabilities	Male	Female	Total

Date of Meeting	Reason for the Meeting	Number of Participants		Major resolutions from the meetings
		Male	Female	

Key Achievements during the Month

Key Challenges during the Month

Key Recommendations

List of Key Activities for the Next Month

Name and Contact of Committee Chairperson…….. Signature……

APPENDIX 10: ENVIRONMENTAL, HEALTH AND SAFETY MONITORING AND ENFORCEMENT CHECKLISTS

Appendix 10.1 SUMMARY OF PLANS TO BE INCLUDED IN THE CONTRACTOR'S CSEMP

The following plans shall constitute the Contractor's Social and Environmental Management Plan. The CSEMP shall be approved as part of the Inception report prior to site handover.

S.No	Plan
1.	Environmental Management Plan
2.	HIV/AIDS and STIs Management Plan
3.	Labour Force Management Plan
4.	Traffic Management Plan
5.	Hazardous Waste Management Plan
6.	Solid Waste Management Plan
7.	Health and Safety Management Plan
8.	Medical Waste Management Plan
9.	Disability Management Plan
10.	Child Protection Plan
11.	Gender Management Plan
12.	Sexual Harassment Control Plan
13.	Smoking Control Plan
14.	Decommissioning Plans
15.	Biodiversity Offset Plan
16.	Re-greening and Restoration Plans
17.	Community Engagement Plan
18.	Grievances Management Plan (for workers and communities)
19.	Training Plans for Workers and adjacent communities
20.	Injurious Impact Mitigation Plan
21.	Physical Cultural Resources Management Plan
22.	Water Management Plan
23.	Security Management Plan
24.	Emergency Management
25.	Records Management Plan

APPENDIX 10.2: SITE ACCIDENT REGISTER FOR THE ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

Date……..Road……..…Location……..

Accident Category	Jan	Feb	Marc	Apri	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Marc	Total	Remedial Actions Taken at Site
Near miss																	
Minor Accident																	
Serious Accident																	
Lost time accident																	
Restricted work case																	
Fatal accident																	
Total																	

Near miss	This is an incident that does not result in injury or damage e.g. tools or materials fell from above, climbers broke while working etc
Minor Accident	An accident that permits the victim to continue with work e.g. minor bleeding from a cut.
Serious Accident	An accident that requires immediate off-site treatment e.g. hospital or clinic.
Lost time accident	Accident that caused a worker to miss work due to the accident.
Restricted work case	Accident where a worker is limited to certain types of work as he recovers.
Fatal accident	Accident which caused death

……

Signed by Site Nurse……..……..….HSE Officer……Site Manager…….

APPENDIX 10.3: HEALTH, SAFETY AND ENVIRONMENT (HSE) REPORTING FORMAT

Contract:

Period of reporting:

HSE management actions/measures:

Summarize HSE management actions/measures taken during period of reporting, including planning and management activities (e.g. risk and impact assessments), HSE training, specific design and work measures taken, etc.

HSE incidents:

Report on any problems encountered in relation to HSE aspects, including its consequences (delays, costs) and corrective measures taken. Include relevant incident reports.

HSE compliance:

Report on compliance with Contract HSE conditions, including any cases of non-compliance.

Changes:

Report on any changes of assumptions, conditions, measures, designs and actual works in relation to HSE aspects.

Concerns and observations:

Report on any observations, concerns raised and/or decisions taken with regard to HSE management during site meetings and visits.

Signature (Name, Title Date):

Contractor Representative

APPENDIX 10.4: WEIGHTED HEALTH, SAFETY, SOCIAL AND ENVIRONMENT (HSSE) COMPLIANCE MONITORING AND ENFORCEMENT CHECKLISTS

Albertine Region Sustainable Development Project

Health, Safety, Social, & Environment (HSSE) Compliance Monitoring Report No.……

Date……Site: ……Location:……
……Contractor……..……
Site Manager (Name and Contact)……HSE Officer……..……Site Nurse……Doctor-on-Call……
No. of workers at site (A) Expatriates Total…… M……..…… F……(B) Nationals: Total…… M……..…F (include roles).....……..……
Activities
(i)……..……..(ii)……..…(iii)…….……(iv)…… ……..…(v)……..……

Section A: Checklist for Health Aspects

Parameter	Wght	Compliance(C/NC)[1]	Remarks/Timelines for Corrective Actions
1.Doctor-on-Call-10	10		
2.Presence of Site Nurse-10	10		
3.Presence of HSE Officer-10	10		
4.Quality Contraceptives-10	10		
4b. HIV/AIDS Management Plan-10	10		
5.HIV/AIDS Training (workers)-10	10		
6.HIV/AIDS Training (communities)-10	10		
6a. Voluntary Counseling and Testing (VCT) for workers	10		
6b. Voluntary Counseling and Testing (VCT) for Communities	10		
6c. Distribution of EIC materials on HIV/AIDS to workers	8		
6d. Distribution of EIC materials on HIV/AIDS to Communities	8		
7. Pre-employment screening-10	10		
8.Pre-Assignment-10	10		
9.Post-employment screening-10	10		
10.Portable and accessible wholesome drinking water for workers -10	10		

11.Safe meals for workers (quality and quantity, meal area, etc)	10		
12. Site Clinic-10	10		
13. Records of cases attended to in a Site Clinic (Work-related and general illnesses, segregated data for Workers and Communities)	10		
14. Zero tolerance to Child Labour (18 and below)-10	10		
14b. Zero tolerance to smoking at construction sites/camps	10		
15. Zero Drug and Alcohol abuse	10		
16. Zero Defilement-10	10		
17.Zero Elopement -10	10		
17b. Zero Sexual Harassment	10		
18. Kitchen Inspection reports-9	9		
19. Kitchen hygiene/sanitation (safety of cooking area, cleanliness, soot removal,…..)	8		
20. Deworming of workers (records…..)	10		
21. Potable water for Visitors-7	7		
22. Safe meals for Visitors-10	10		
23. First Aid Kit (stocked and accessible)-10	10		
24. First Aid Contents checklist-9	9		
25. Records of cases attended to by the First Aider (5W, 1H and Treatment)	8		
26. Presence of Trained and available First Aiders per shift/gangs	10		
Sub-Total (Health)	317		
Compliance (%)			

Section B: Safety compliance checklist				
	1.Personal Protective Equipment (PPE) for workers-(type, adequacy and appropriateness)	10		
	2.Personal Protective Equipment (PPE) for visitors-(type, adequacy and appropriateness)	9		
	3.Safety training for workers--(timing, adequacy and appropriateness)	10		
	4.Safety training for communities--(timing, adequacy and appropriateness)	9		
	5.Tool box talks --(daily, adequacy, participation and appropriateness)	10		
	6.Site emergency operational contacts (conspicuously displayed, accessible, legible)	8		
	7.High Way signages (conspicuously displayed, accessible, legible)	10		
	8.Site signages (conspicuously displayed, accessible, legible)	8		
	9.Visitors register (accessible, legible)	8		
	10.Askari/Security-trained and in uniform-10	10		
	11.Traffic guides/flag assistants (trained in safety, protected, visible,)	10		
	12.Speed limits (conspicuously displayed, accessible, legible)	10		
	13. Fire extinguishers (appropriate type, accessible, serviced, adequate)	10		
	14.Fire assembly points (accessible, legible, appropriate for the purpose)	9		
	15.Noise management (measurements, affected persons, protection and eng. controls)	9		
	15b.Site office/Workers' camp	10		
	16. Site/Store/Workers' camp Gate(guarded)	10		
	17. Camp/Store/Site Fence (appropriate)	10		
	18.Accident statistical analysis, trends-monthly)	9		
	19.Warning tapes at foundations (conspicuously displayed, accessible, legible)	8		

	20.Barricades at foundations (conspicuously displayed, accessible, legible)	10		
	20b. Zero Open Trenches/Ditches (appropriate)	9		
	21. Car parking area (accessible, legible, appropriate for the purpose)	9		
	22. Vehicles register (accessible, legible)	9		
	23. Vehicle First Aid Kits (stocked and accessible)-10	10		
	24. Servicing of vehicles (records)	10		
	25. Valid Drivers' Permits	10		
	Total	254		
	Compliance (%)			
	Section D: Environment management checklist			
	1.Mobile toilets/Latrines for Men-(adequacy, accessible, hygiene, privacy, PWD Access, hand washing basins)	10		
	2.Mobile toilets/Latrines for Women--(adequacy, accessible, hygiene, privacy, PWD Access, Foot Operated lined sanitary buckets, hand washing basins)	10		
	2b. Well-maintained Soak Pits	10		
	3.Bathrooms for Men -(adequacy, accessible, hygiene, privacy, PWD Access,)	9		
	4.Bathrooms for Women--(adequacy, accessible, hygiene, privacy, PWD Access,)	10		
	5.Environment management training for workers (signed records, photos, videos)	10		
	6.Environment management training for communities (signed records, photos, videos)	10		
	8.Dustbins (plastics) (labeled, accessible, appropriate, size)	10		
	9.Dustbins (biodegradables)- (labeled, accessible, appropriate, size)	10		

	10.Dustbins (metals/glass)- (labeled, accessible, appropriate, size)	10		
	11.Temporal Waste Dumping site(s) (labeled, accessible, appropriate, size)	10		
	11d. Disposal of wastes (transportation, segregation, gazetted dumping sites, etc)	10		
	12.Drainage channels (un clogged)	9		
	13.Restoration of vegetation-(better or to original state/maintain the indigenous flora)	10		
	14.Retainer walls (gradient, signage, activities above, as per soil tests)	7		
	15.Restoration of land scape -(better or to original state/maintain the indigenous flora)	10		
	16.Dust management (type of dust, timely sprinkling of water, control of traffic)	9		
	17. Submission of HSE management reports to MC(accurate, credibile, consistent with indicators, concise, etc.)	10		
	19. Water Abstraction Permit-(records, displayed, valid)	10		
	20. Warning Letters (First) issued to Non-Compliant workers on HSE-9	9		
	20b. Warnings (Strict) issued to Non-Compliant workers-9	10		
	20c. Warnings (Very strict) issued to Non-Compliant workers-9	9		
	21.Oil spill management (containment, waste oil receptors, oil drums, fire protection)	10		
	22.NEMA Approval for storage yard (displayed, valid License)	10		
	23. Compliance with Wetland Permit Conditions-(displayed, valid License)	10		
	24. Compliance with Forest Permit Conditions-(displayed, valid License)	10		
	25. Compliance with Traffic Permit Conditions-(displayed, valid License)	9		

	27. Grievance Redress Committee (displayed names, valid contacts, accessible, democratically-elected workers' representatives)	10		
	28. Functional GRC Committee (minutes, quarterly consolidated reports)	9		
	29. District/Municipal Health Inspector's monthly reports for the Site-10	10		
	29b. District/Municipal Labour Officers' monthly reports for the Site-10	10		
	32. Water meters-(accessible)	9		
	33. Payments for water used at Sites-(records)	9		
	34. Submission of Water Abstraction reports	10		
	35. Sand mining License (displayed valid)	9		
	36. Community Engagement meetings	8		
	37. Re-use of construction waste materials e.g wood, steel	8		
	38. Proper disposal of NH construction waste materials e.g. cement bags	10		
	39. Destruction Certificates for Hazardous construction waste materials e.g. oil drums, oils	10		
	Total	373		
	Compliance (%)			

	Section E: Gender & Culture checklist			
	1. Employment of community members-9	9		
	1b. Employment of Women-9	9		
	2. Employment of the Elderly-9	9		
	3. PWD-friendly working environment-9	9		
	4. Employment of the PWDs-9	9		
	6. Cultural Resource Management Plan-10	10		
	7. Avoidance/relocation of cultural resources-9	9		
	8. Archeological finds reports-8	8		
	9. Avoidance of Vulgar language-10	10		
	10. Resting shades for workers	8		
	12. Changing rooms for workers (appropriate, space, separate by sex, privacy)	8		
	13. Workers' leave days (type, duration, wages,)	9		
	14. Maternity leave (duration, wages,)	10		
	15. Paternity leave (duration, wages,)	9		
	16. Activities for Work-life balance (games, sports, travels, etc)	10		
	17. Breast feeding mothers (shelters, breaks, appropriate meals, working hrs)	9		
	Subtotal	145		
	Compliance (%)			

[2]Overall compliance (%)……Attachments (attendance lists, permits, photos, etc)……

Recommendations

(i)……(ii)……(iii)……

(iv)…….. (v)…….. (vi)……..

(vii)…….. (viii)……..

(ix)……..

Inspector/Monitor……Signature……..……..Date…

……..……

APPENDIX 10.5: SITE DISCIPLINARY COMMITTEE (SDC) STRUCTURE

S.No	Designation at Site	Position in the SDC
1	Site Manager	Chairperson
2	HSE Officer	Secretary
3	Site Nurse	Member
4	Caterer	Member
5	Security Officer	Member
6	Site Foreman	Member
7	LC1-Representative	Member
8	Workers' Representative (Male)	Member
9	Workers' Representative (Female)	Member

APPENDIX 10.6: SITE EMERGENCY CONTACTS

S.No	Designation	Entity	Telephone Number*
1	Site Manager	Contractor	
2	HSE Officer	Contractor	
3	Site Nurse	Contractor	
4	Caterer	Contractor	
5	Security Officer	Contractor	
6	Site Foreman	Contractor	
7	LC1-Representative	Village	
8	Workers' Representative (Male)	Contractor	
9	Workers' Representative (Female)	Contractor	
10	Project Manager	MLHUD	
11	Environmental Safeguard Specialist	MLHUD	
12	Social Safeguard Specialist	MLHUD	
13	Resident District Commissioner	District Local Government	
14	District Health Officer	District Local Government	
15	District Environment Officer	District Local Government	
16	District Gender/Probation Officer	Ministry of Gender, Labour and Social Development	
17	District Labour Officer	Ministry of Gender, Labour and Social Development	
18	District Police Commander	Uganda Police Force	
19	O/C Police	Uganda Police Force	
20	OC Fire Brigade	Uganda Police Force	
21	Project Manager	Consultant	
22	HSE Officer	Consultant	

*Telephone Numbers to be determined during project implementation

APPENDIX 11:CONTRACTOR AND WORKERS' CODES OF CONDUCT

Appendix 11.1: Contractor and Workers' Commitment to Social Risk Management

I……..do hereby commit to comply with the child protection regulations, Zero Gender Based Violence, Zero Sexual Harassment, Zero Child Labour, Zero Elopement and Zero Use of Vulgar Language during the execution of my activities in the ARSDP project. Failure to comply shall lead to my automatic dismissal or prosecution in the Courts of Law or both.

Signed/Thumb print……Date……

APPENDIX 11.2: CONTRACTOR AND WORKERS' COMMITMENT TO USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

I……..do hereby commit to comply with the consistent use of Personal Protective Equipment (PPE) during the execution of my activities in the ARSDP project. Failure to comply shall lead to my automatic dismissal or prosecution in the Courts of Law or both.

Signed/Thumb print……Date……

APPENDIX 11.3: CONTRACTOR AND WORKERS' COMMITMENT TO HEALTH, SANITATION AND ENVIRONMENTAL MANAGEMENT

I……..do hereby commit to comply with the consistent observance of health, sanitation and environmental requirements during the execution of my activities in the ARSDP project. Failure to comply shall lead to my automatic dismissal or prosecution in the Courts of Law or both.

Signed/Thumb print……Date……

APPENDIX 11.4: CONTRACTOR AND WORKERS' COMMITMENT TO CAMP MANAGEMENT

I……..do hereby commit to comply with the consistent observance of the bye-laws, regulations, policies and laws in force at the workers' camp and its environs. Failure to comply shall lead to my automatic dismissal or prosecution in the Courts of Law or both.

Signed/Thumb print……Date……

APPENDIX 11.5: CONTRACTOR AND WORKERS' COMMITMENT TO RENTAL APARTMENT MANAGEMENT

I……..do hereby commit to comply with the consistent observance of the bye-laws, regulations, policies and laws in force at the Rental apartment and its environs. This among others, may include timely payment of rent and associated dues. Failure to comply shall lead to my automatic dismissal or prosecution in the Courts of Law or both.

Signed/Thumb print……Date……

APPENDIX 11.6: BASIC GUIDE ON RECRUITMENT OF MANUAL LABOURERS FROM HOST COMMUNITIES

No.		Step	Requirements	Responsibility
1.		Application for a job	Application letter (signed and/with thumb print) from the Job Seeker	Job Seeker
2.		Recommendation	Submission of recommendation letter from the Area Local Council, Religious Leader or Prominent Person	Area Local Council, Religious Leader or Prominent Person
3.		Age verification	Birth Certificate/Baptism Card/School ID/National ID/Village ID	Job Seeker
4		Due diligence	Confirmatiton of past performance/ethical conduct/age from recommenders and peers	Contractor/ Consultant/DCDO/ MLHUD
5.		Pre-employment screening	Medical check-ups for fitness, previous health records may be needed for confirmation by the Nurse.	Site Nurse
6.		Signature of Codes of Conduct	Annex 8 (a-d)	Contractor/Job Seeker
7.		Engagement	Employee and Employer sign engagement contract	Contractor/Job Seeker
8.		Allocation of Personal Protective Equipment (PPE)	Appropriate gear such as overalls, boots, hard hats, welding shields, nose, ear muffs, hand gloves	Contractor/Person Engaged
9.		Pre-assignment screening	The Contractor's HSE Officer and Site Nurse takes the new staff through the task to check ability and safety awareness	Contractor/Person Engaged/DLG/MLHUD
10.		Employment induction drills/Training	A detailed training on Health, Safety, Social, GBV, Environment, Labour and	Contractor/Person Engaged/DLG/MLHUD

			Gender and Contractual obligations	
11		Regular Tool Box talks	Daily tool box talks	Contractor/Person Engaged/DLG/MLHUD

APPENDIX 17.7: GENERAL ENVIRONMENTAL AND SOCIAL MANAGEMENT CONDITIONS FOR CONSTRUCTION CONTRACTS (TO BE SIGNED BY THE CONTRACTOR)

General

1. In addition to these general conditions, the Contractor shall comply with any specific Environmental Management Plan (EMP) or Environmental and Social Management Plan (ESMP) for the works he is responsible for. The Contractor shall inform himself about such an EMP, and prepare his work strategy and plan to fully take into account relevant provisions of that EMP. If the Contractor fails to implement the approved EMP after written instruction by the Supervising Engineer (SE) to fulfill his obligation within the requested time, the Owner reserves the right to arrange through the SE for execution of the missing action by a third party on account of the Contractor.

2. Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance requirements specified in an EMP. In general these measures shall include but not be limited to:

(a) Minimize the effect of dust on the surrounding environment resulting from earth mixing sites, asphalt mixing sites, dispersing coal ashes, vibrating equipment, temporary access roads, etc. to ensure safety, health and the protection of workers and communities living in the vicinity dust producing activities.

(b) Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) are kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.

(c) Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels is maintained and/or re-established where they are disrupted due to works being carried out.

(d) Prevent bitumen, oils, lubricants and waste water used or produced during the execution of works from entering into rivers, streams, irrigation channels and other natural water bodies/reservoirs, and also ensure that stagnant water in uncovered borrow pits is treated in the best way to avoid creating possible breeding grounds for mosquitoes.

(e) Prevent and minimize the impacts of quarrying, earth borrowing, piling and building of temporary construction camps and access roads on the biophysical environment including protected areas and arable lands; local communities and their settlements. In as much as possible restore/rehabilitate all sites to acceptable standards.

(f) Upon discovery of ancient heritage, relics or anything that might or believed to be of archeological or historical importance during the execution of works, immediately report such findings to the SE so that the appropriate authorities may be expeditiously contacted for fulfillment of the measures aimed at protecting such historical or archaeological resources.

(g) Discourage construction workers from engaging in the exploitation of natural resources such as hunting, fishing, collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities.

(h) Implement soil erosion control measures in order to avoid surface run off and prevents siltation, etc.

(i) Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camps.

(j) Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long distance transportation.

(k) Ensure public safety, and meet traffic safety requirements for the operation of work to avoid accidents.

3. The Contractor shall indicate the period within which he/she shall maintain status on site after completion of civil works to ensure that significant adverse impacts arising from such works have been appropriately addressed.

4. The Contractor shall adhere to the proposed activity implementation schedule and the monitoring plan / strategy to ensure effective feedback of monitoring information to project management so that impact management can be implemented properly, and if necessary, adapt to changing and unforeseen conditions.

5. Besides the regular inspection of the sites by the SE for adherence to the contract conditions and specifications, the Owner may appoint an Inspector to oversee the compliance with these environmental conditions and any proposed mitigation measures. State environmental authorities may carry out similar inspection duties. In all cases, as directed by the SE, the Contractor shall comply with directives from such inspectors to implement measures required to ensure the adequacy rehabilitation measures carried out on the bio-physical environment and compensation for socio-economic disruption resulting from implementation of any works.

Worksite/Campsite Waste Management

6. All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous chemicals shall be bunded in order to contain spillage. All waste containers, litter and any other waste generated during the construction shall be collected and disposed off at designated disposal sites in line with applicable government waste management regulations.

7. All drainage and effluent from storage areas, workshops and camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.

8. Used oil from maintenance shall be collected and disposed off appropriately at designated sites or be re-used or sold for re-use locally.

9. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.

10. Construction waste shall not be left in stockpiles along the road, but removed and reused or disposed of on a daily basis.

11. If disposal sites for clean spoil are necessary, they shall be located in areas, approved by the SE, of low land use value and where they will not result in material being easily washed into drainage channels. Whenever possible, spoil materials should be placed in low-lying areas and should be compacted and planted with species indigenous to the locality.

Material Excavation and Deposit

12. The Contractor shall obtain appropriate licenses/permits from relevant authorities to operate quarries or borrow areas.

13. The location of quarries and borrow areas shall be subject to approval by relevant local and national authorities, including traditional authorities if the land on which the quarry or borrow areas fall in traditional land.

14. **New extraction sites:**

a) Shall not be located in the vicinity of settlement areas, cultural sites, wetlands or any other valued ecosystem component, or on on high or steep ground or in areas of high scenic value, and shall not be

located less than 1km from such areas. b) Shall not be located adjacent to stream channels wherever possible to avoid siltation of river channels. Where they are located near water sources, borrow pits and perimeter drains shall surround quarry sites. c) Shall not be located in archaeological areas. Excavations in the vicinity of such areas shall proceed with great care and shall be done in the presence of government authorities having a mandate for their protection. d) Shall not be located in forest reserves. However, where there are no other alternatives, permission shall be obtained from the appropriate authorities and an environmental impact study shall be conducted. e) Shall be easily rehabilitated. Areas with minimal vegetation cover such as flat and bare ground, or areas covered with grass only or covered with shrubs less than 1.5m in height, are preferred. f) Shall have clearly demarcated and marked boundaries to minimize vegetation clearing.

15. Vegetation clearing shall be restricted to the area required for safe operation of construction work. Vegetation clearing shall not be done more than two months in advance of operations.

16. Stockpile areas shall be located in areas where trees can act as buffers to prevent dust pollution. Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.

17. The Contractor shall deposit any excess material in accordance with the principles of these general conditions, and any applicable EMP, in areas approved by local authorities and/or the SE.

18. Areas for depositing hazardous materials such as contaminated liquid and solid materials shall be approved by the SE and appropriate local and/or national authorities before the commencement of work. Use of existing, approved sites shall be preferred over the establishment of new sites.

Rehabilitation and Soil Erosion Prevention

19. To the extent practicable, the Contractor shall rehabilitate the site progressively so that the rate of rehabilitation is similar to the rate of construction.

20. Always remove and retain topsoil for subsequent rehabilitation. Soils shall not be stripped when they are wet as this can lead to soil compaction and loss of structure.

21. Topsoil shall not be stored in large heaps. Low mounds of no more than 1 to 2m high are recommended.

22. Re-vegetate stockpiles to protect the soil from erosion, discourage weeds and maintain an active population of beneficial soil microbes.

23. Locate stockpiles where they will not be disturbed by future construction activities.

24. To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.

25. Remove toxic materials and dispose of them in designated sites. Backfill excavated areas with soils or overburden that is free of foreign material that could pollute groundwater and soil.

26. Identify potentially toxic overburden and screen with suitable material to prevent mobilization of toxins.

27. Ensure reshaped land is formed so as to be inherently stable, adequately drained and suitable for the desired long-term land use, and allow natural regeneration of vegetation.

28. Minimize the long-term visual impact by creating landforms that are compatible with the adjacent landscape.

29. Minimize erosion by wind and water both during and after the process of reinstatement.

30. Compacted surfaces shall be deep ripped to relieve compaction unless subsurface conditions dictate otherwise.

31. Revegetate with plant species that will control erosion, provide vegetative diversity and, through succession, contribute to a resilient ecosystem. The choice of plant species for rehabilitation shall be done in consultation with local research institutions, forest department and the local people.

Water Resources Management

32. The Contractor shall at all costs avoid conflicting with water demands of local communities.

33. Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.

34. Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.

35. Temporary damming of streams and rivers shall be done in such a way avoids disrupting water supplies to communities down stream, and maintains the ecological balance of the river system.

36. No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses.

37. Wash water from washing out of equipment shall not be discharged into water courses or road drains.

38. Site spoils and temporary stockpiles shall be located away from the drainage system, and surface run off shall be directed away from stockpiles to prevent erosion.

Traffic Management

39. Location of access roads/detours shall be done in consultation with the local community especially in important or sensitive environments. Access roads shall not traverse wetland areas.

40. Upon the completion of civil works, all access roads shall be ripped and rehabilitated.

41. Access roads shall be sprinkled with water at least five times a day in settled areas, and three times in unsettled areas, to suppress dust emissions.

Blasting

42. Blasting activities shall not take place less than 2km from settlement areas, cultural sites, or wetlands without the permission of the SE.

43. Blasting activities shall be done during working hours, and local communities shall be consulted on the proposed blasting times.

44. Noise levels reaching the communities from blasting activities shall not exceed 90 decibels.

Disposal of Unusable Elements

45. Unusable materials and construction elements such as electro-mechanical equipment, pipes, accessories and demolished structures will be disposed of in a manner approved by the SE. The Contractor has to agree with the SE which elements are to be surrendered to the Client's premises, which will be recycled or reused, and which will be disposed of at approved landfill sites.

46. As far as possible, abandoned pipelines shall remain in place. Where for any reason no alternative alignment for the new pipeline is possible, the old pipes shall be safely removed and stored at a safe place to be agreed upon with the SE and the local authorities concerned.

47. AC-pipes as well as broken parts thereof have to be treated as hazardous material and disposed of as specified above.

48. Unsuitable and demolished elements shall be dismantled to a size fitting on ordinary trucks for transport.

Health and Safety

49. In advance of the construction work, the Contractor shall mount an awareness and hygiene campaign. Workers and local residents shall be sensitized on health risks particularly of AIDS.

50. Adequate road signs to warn pedestrians and motorists of construction activities, diversions, etc. shall be provided at appropriate points.

51. Construction vehicles shall not exceed maximum speed limit of 40km per hour.

Repair of Private Property

52. Should the Contractor, deliberately or accidentally, damage private property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.

53. In cases where compensation for inconveniences, damage of crops etc. are claimed by the owner, the Client has to be informed by the Contractor through the SE. This compensation is in general settled under the responsibility of the Client before signing the Contract. In unforeseeable cases, the respective administrative entities of the Client will take care of compensation.

Contractor's Health, Safety and Environment Management Plan (HSEMP)

54. Within 6 weeks of signing the Contract, the Contractor shall prepare an EHS-MP to ensure the adequate management of the health, safety, environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an EMP for the works. The Contractor's EHS-MP will serve two main purposes: For the Contractor, for internal purposes, to ensure that all measures are in place for adequate HSE management, and as an operational manual for his staff. For the Client, supported where necessary by a SE, to ensure that the Contractor is fully prepared for the adequate management of the HSE aspects of the project, and as a basis for monitoring of the Contractor's HSE performance.

55. The Contractor's EHS-MP shall provide at least: a description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an EMP; a description of specific mitigation measures that will be implemented in order to minimize adverse impacts; a description of all planned monitoring activities (e.g. sediment discharges from borrow areas) and the reporting thereof; and the internal organizational, management and reporting mechanisms put in place for such.

56. The Contractor's EHS-MP will be reviewed and approved by the Client before start of the works. This review should demonstrate if the Contractor's EHS-MP covers all of the identified impacts, and has defined appropriate measures to counteract any potential impacts.

HSE Reporting

57. The Contractor shall prepare bi-weekly progress reports to the SE on compliance with these general conditions, the project EMP if any, and his own EHS-MP. An example format for a Contractor HSE report is given below. It is expected that the Contractor's reports will include information on: HSE management actions/measures taken, including approvals sought from local or national authorities; Problems encountered in relation to HSE aspects (incidents, including delays, cost consequences, etc. as a result thereof); Lack of compliance with contract requirements on the part of the Contractor; Changes of assumptions, conditions, measures, designs and actual works in relation to HSE aspects; and Observations, concerns raised and/or decisions taken with regard to HSE management during site meetings.

58. It is advisable that reporting of significant HSE incidents be done "as soon as practicable". Such incident reporting shall therefore be done individually. Also, it is advisable that the Contractor keep his own records on health, safety and welfare of persons, and damage to property. It is advisable to include such records, as well as copies of incident reports, as appendixes to the bi-weekly reports. Example formats for an incident notification and detailed report are given below. Details of HSE performance will be reported to the Client through the SE's reports to the Client.

Training of Contractor's Personnel

59. The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the relevant aspects of these general conditions, any project EMP, and his own EHS-MP, and are able to fulfil their expected roles and functions. Specific training should be provided to those employees that have particular responsibilities associated with the implementation of the EHS-MP. General topics should be: HSE in general (working procedures); emergency procedures; and social and cultural aspects (awareness raising on social issues).

Cost of Compliance

60. It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item "Compliance with Environmental Management Conditions" in the Bill of Quantities covers these costs. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable HSE impact.

APPENDIX 14: GUIDELINES FOR ESTABLISHMENT, OPERATION AND DECOMMISSIONING OF BORROW PITS

Introduction
Unless specified in the Environmental and Social Impact Assessment (ESIA) and/or Contract, the Contract should take it that no valid approvals exist for the borrow pit location(s) and all relevant approvals/ clearances must be sought.

Preliminary work
Compile basic information on the proposed pit, including:

- plan(s) showing the location and dimensions of the proposed borrow pit, including aerial photography and at least 4 GPS coordinates of pit boundaries (note that if extending an existing pit, GPS coordinates of the existing and proposed new boundaries must be provided)
- photos showing pit location, visibility, vegetation and topography
- certificate of title/ lease details and ownership details
- details of proposed operation, eg:
  - type and volume of material to be extracted and proposed use,
  - method of extraction proposed (ripping, blasting, scraper etc), and whether any processing will occur on site,
  - pit depth and area of land affected,
  - depth and type of overburden,
  - timeframe for operation (include start and finish dates, staging arrangements and long term stockpiling needs),
  - haulage routes for materials and maintenance proposed for local roads,
  - proposed rehabilitation

Gaining Legal Access to the Land (Borrow Site)
The most appropriate method for the Contractor to gain legal access to land for the purpose of operating borrow pits depends on the land tenure. The various circumstances and methods are described below. When accessing or using land in which native title rights exist it is also necessary to comply with the Land Act, Cap 227 and the Land Acquisition Act of 1965.

Freehold and customary land

In the first instance the Contractor shall negotiate verbally with the land owner/ lessee with regard to access to the land and compensation, if applicable (having regard to the information in Section 2 of this document).

If negotiations are straightforward and no compensation is required, the Contractor and the Land Owner shall prepare a simple written agreement between the Contractor and the land owner.

If it is considered necessary to offer compensation to the land owner, and/or negotiations are complex, prepare a more detailed agreement between the Contractor and the land owner, outlining the particulars of the borrow pit operation and any agreed compensation.

Arrange for two copies of the agreement to be signed by the land owner and the Contractor. One copy shall be retained by the land owner and one copy shall be retained by the Contractor.

Public Land

The Contractor shall seek authorisation to operate a borrow pit from public land from the Local Government or appropriate authority. The application should include a description of the land, a map showing the location of the pit as well as a copy of the civil works contract.

For leasehold land, negotiate consent with the leaseholder/ custodian in addition to the above authorisation will be required before the Contractor

Environmental Assessment

Undertake an Environmental Impact Assessment of the proposed pit and associated infrastructure (eg haul roads) in accordance with the National Environment Act of 1995. In addition, assess proposed pit sites against erosion control, water retention, potential vegetation clearance, impact on natural and cultural resources and visual impact, among others.

Specify management measures to minimise environmental impacts during and after the operation of the pit, e.g. by ensuring the base of the pit is not conducive to holding water (can be ripped/fractured or left with rocky material instead of high Plasticity Index (PI) material), implementing erosion control on haul roads (no windrows, minimal gradient, suitable drainage to prevent runoff from concentrating and creating channels).

External Approvals and Licences

Unless the borrow pit falls within one of the exemptions described in the National Environment Act of 1995, the Contractor shall submit ESIA and other relevant Permits for all new or re-opened borrow pits for which there is no valid approval to the Ministry of Lands, Housing and Urban Development.

If the borrow pit is to be established on Privately registered land and results in the creation of a new water source that can be used by the lessee for stock on a semi-permanent basis notify the Directorate of Water Resources Management (DWRM) and obtain permission. Notification is not required if, after work has finished at the borrow pit, no additional water source is provided to the lessee.

Post approval actions

Confirm the date of commencement of operations with the land owner and if applicable arrange payment of compensation to land owner in accordance with the agreement.

Submit the following information to the Ministry of Lands, Housing and Urban Development

- Pit name (if applicable)
- Road Number, Maintenance Marker location, offset from road and which side of road
- GPS coordinates of pit boundaries (at least 4)
- Material type and purpose (and approximate PI and Los Angeles Abrasion, if available)
- Area quarried and Area remaining
- Depth
- Volume stockpiled
- Overburden depth
- Area remaining
- Land owner name

- Landowner agreement
- Cultural heritage assessment and report/ clearance (if applicable)
- Vegetation removal approval (if applicable)
- Any useful and relevant comments to summarise clearance conditions/ assist with interpretation of assessment/ approval documents.

For each 1-month period that the borrow pit is operating, complete the form in **Annex I** and submit it to the Ministry of Lands, Housing and Urban Development.

Completion of operations

Verify that the environmental management requirements specified for temporary or permanent closure of the pit are implemented (eg erosion control on haul roads, ripping/fracturing the base of the pit to ensure it is not conducive to holding water).

Photograph the pit upon decommissioning/ rehabilitation and submit photos to the Ministry of Lands, Housing and Urban Development, along with confirmation that the required rehabilitation has been undertaken.

Submit a detailed decommissioning and rehabilitation report to the Ministry of Lands, Housing and Urban Development and the relevant District Local Government.

Annex I: Data to be provided in 1-monthly mining return

The following data for each 1-month period to be submitted to the Ministry of Lands, Housing and Urban Development

Project name:
Project financial details - Budget line, Contract number *(for monitoring using applicable standards in the Financing Agreement, if applicable)*:
Location of site *(include road running distance or coordinates if available):*
Crushing contract number:
Tonnage (as accurately as possible) of material raised in the applicable six-month period[1]:
Tonnage of material used in the applicable six month period:
Type of commodity,
Record or evidence of quantities raised (e.g. photos and raw data sheets, etc)
Approximate cost per tonne to crush[2]:
Tonnage (as accurately as possible) of any material supplied to the land owner (either as part of or in addition to the agreement with the land owner):

[1] This refers only to material raised in that period, not stockpiled material that was raised at other times
[2] This information is used to estimate the market value of the material,

APPENDIX 15: ATTENDANCE REGISTERS FOR CONSULTATIONS WITH ENVIRONMENTAL BASED STAKEHOLDERS

Buliisa District Natural Resources Officers

MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT PROJECT

Albertine Regional Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Biophysical and Health and Safety Baseline Conditions in Project Briefs For Batch 1 Sub Projects in Buliisa And Hoima Districts.

List of Stakeholders Consulted : DISTRICT- BULIISA

S/N	Name	Designation	Contact	Signature
01	Tomusime ROGERS	DED	0784986552	
02	MURUNGI MOSES	DFO	0772429015	
03	MUHEREKI HIDA	D.P.P	0781398757	

BULIISA CENTRAL POLICE STATION

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd Joint/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool L3: Consultations on the Bio-Physical and Health and Safety Baseline conditions.

Date: 18/08/2017 **District** BULIISA ***source of information** POLICE

Names and phone contacts of Enumerators (i) Wandukwa Emma (ARSDP) **(ii)** ANGUAHDIA D. JUDAH 0786602626

(ii) BAWA ALEX (ARSDP) **(iv)** D/ASP. Irangira Moses OC. CID Buliisa 07788572[illegible]

S/N	Issues	Guiding questions	Specific location	remarks
1	Health and safety	What is the current frequency of accidents in the area? - Caused due to poor roads, water logged areas over speeding (31 accidents Recorded 2017 to date)	Buliisa Biiso Rd, Kisabi Kabolwa, Wanseko centre, Ngwedo T/C	- Low rate of accidents (Buliisa) - Serious in Nature (21)
		What are the possible impacts of the proposed road projects on the health of communities? - improved sanitation due 2 good drainage on Roads. - Reduction of Water born diseases	Buliisa Bugana. Kabolwa Road, Kubukwa, Ndandamire Rd.	Satisfactory.
		What should be undertaken to ensure health communities? - Continuous sensitization on use of Roads & AIDs/HIV. - Install Road signs.		
		What are the possible impacts of the proposed road projects on the safety of communities? - Over speeding on good Roads. - Improved drainage on Roads esp. Kabolwa.		
		What should be undertaken to ensure safety communities? - Install speed Limits/measures. - Continuous Sensitization of HIV/AIDs & Road use - Engagement of Police Dept	All Roads in Buliisa	Satisfactory

*labour officer, district health officer, police

T.D - Trading centre.

BUNYORO-KITARA KINGDOM CHIEF

MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT PROJECT

Albertine Regional Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Biophysical and Health and Safety Baseline Conditions in Project Briefs For Batch 1 Sub Projects in Buliisa And Hoima Districts.

List of Stakeholders Consulted : Bunyoro Kitara

S/N	Name	Designation	Contact	Signature
	Byaruhanga Nelson	Project manager	0779721594	
	Muhumuza Raymond	BTRUDO	0780269483	
	Mugisa Blasio	Elder/King's Advisor	0776607377	

LACWADO-BULIISA DISTRICT

CONSULTATIONS (BULIISA)

MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT PROJECT

Albertine Regional Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Biophysical and Health and Safety Baseline Conditions in Project Briefs For Batch 1 Sub Projects in Buliisa And Hoima Districts.

List of Stakeholders Consulted : LACKIADO Buliisa District

S/N	Name	Designation	Contact	Signature
1.	Kabagembe Kamanda	Volunteer	0784744769	[signature]
2.	Atugonza Caroline	office Admin	0785309478	[signature]

Uganda Wildlife Authority (UWA)-Murchison Falls National Park Office, Buliisa

MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT PROJECT

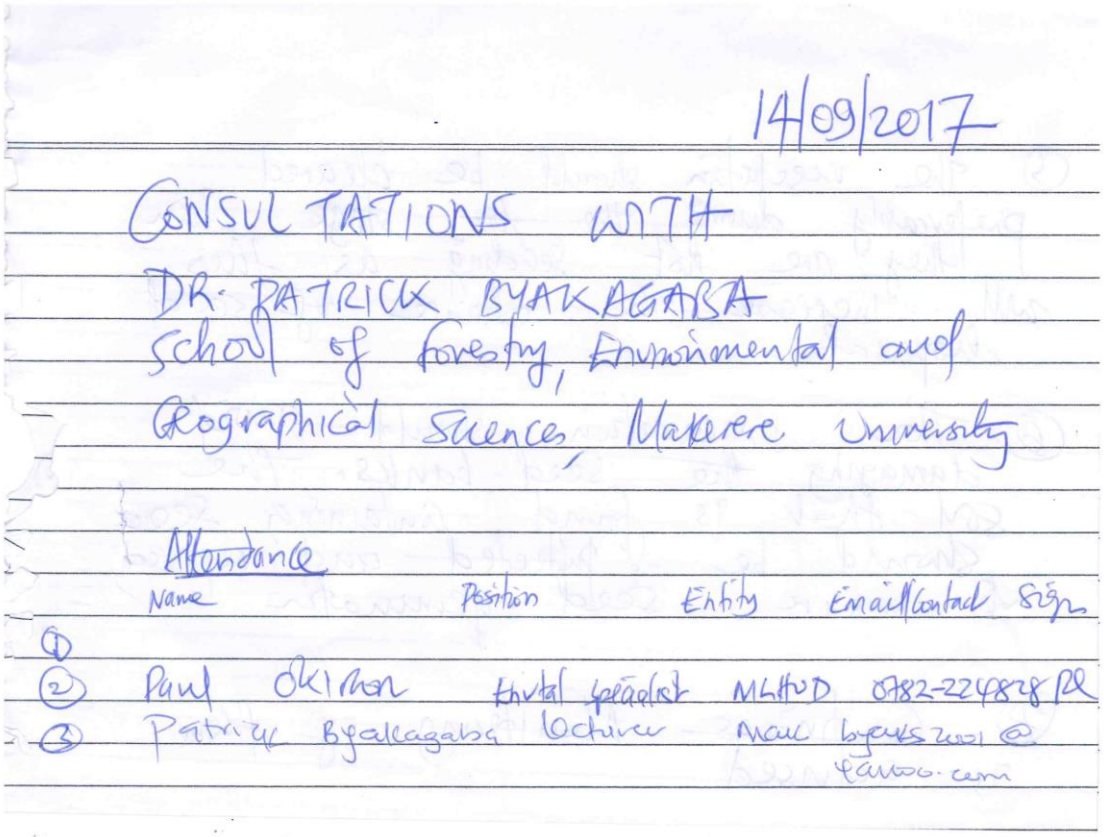
Albertine Regional Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Biophysical and Health and Safety Baseline Conditions in Project Briefs For Batch 1 Sub Projects in Buliisa And Hoima Districts.

List of Stakeholders Consulted : Uganda Wildlife Authority (MFNP)
18/08/2017 from 11:58Am – 1:24 PM

S/N	Name	Designation	Contact	Signature
01	Ahabasadha moses	Warden in charge of monitoring	UWA 0772548960	
02	PAUL. OKIROR	Environmental Specialist	MLHUD 0782-224828	
03	Kwaiso Ephraide	UWA - WCC	0772643062	
04	Daniel Mulindwa	Botanist.	MAK alum.	0752762807 and
05	Kigoolo Stephen	Herpetologist	"	0772624274
06	Aha			

Makerere University, School of Forestry, Environmental and Geographical Sciences.



14/09/2017

CONSULTATIONS WITH

DR. PATRICK BYAKAGABA

School of Forestry, Environmental and Geographical Sciences, Makerere University

Attendance

	Name	Position	Entity	Email/Contact	Sign
1					
2	Paul Okiror	Envtal specialist	MLHUD	0782-224828	
3	Patrick Byakagaba	Lecturer	Mail	byaks2001@yahoo.com	

Uganda National Roads Authority-Hoima Station Officer and Bunyoro-Kitara Kingdom

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

List of Stakeholders Consulted

Date: ~~6/06/2017~~ 6/09/2017 Location: UNRA-HOIMA BUNYORO KITARA KINGDOM District: HOIMA Start time:........ End time:........

S/N	Name	Sex	Designation	Entity	Telephone	E-mail	Signature
01	Byamukama Richard	M	RME	UNRA	077[illegible]	richos.byamukama@unra.go.ug	
02	Asaba Taddeo	M	C/Man Landboard	BKK Bunyoro Kitara Kingdom	0782629196	asabataddeo@gmail.com	

APPENDIX 18: WATER RISK ASSESSMENT LABORATORY REPORTS

WRAB1: Kijange Pond 3

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY – BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: KJP3
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	KJP3	National Standards for Environmental Water.
WS Sample Nr	--	K3971/17/C/B	
Total Suspended Solids (TSS)	mg/L	580	100
Alkalinity: Total	mg/L	116	800
Nitrate	mg/L	0.93	10.0
Colour (apparent)	PtCo	7300	500
B.O.D	mg/L	33.1	50
COD	mg/L	127	100
Calcium: as Ca^{2+}	mg/L	6.4	Not specified
Iron: Total	mg/L	0.012	10.0
Ortho-Phosphate: Reactive	mg/L	0.59	5.0
Fat, Oil & Grease (FOG)	mg/L	1.19	10.0
Total Phosphorous (TP)	mg/L	1.239	10.0
Total Nitrogen (TN)	mg/L	94	20.0
Bact: Faecal Coliforms	CFU/100mL	200	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of Colour, TSS, COD and TN as compared to the National Standards for Environmental water
ANALYSED BY: Robinah Mukeirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department

NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

NATIONAL WATER & SEWERAGE CORPORATION
ES
P.o. Box 7053 Kampala, Uganda
Tel:+256633315111/715
Email:external.services@nwsc.co.ug
REF. NO.:
SIGN:
DATE:
EXTERNAL SERVICES

WRAB2: Community Well-Kalyango (CWR)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: CWR
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	CWR, V-Kalyango	National Standards for Environmental Water.
WS Sample Nr	--	K3970/17/C/B	
Total Suspended Solids (TSS)	mg/L	95	100
Alkalinity: Total	mg/L	12	800
Nitrate	mg/L	0.19	10.0
Colour (apparent)	PtCo	1016	500
B.O.D	mg/L	3.24	50
COD	mg/L	10	100
Calcium: as Ca^{2+}	mg/L	0.0	Not specified
Iron: Total	mg/L	1.109	10.0
Ortho-Phosphate: Reactive	mg/L	0.991	5.0
Fat, Oil & Grease (FOG)	mg/L	0.09	10.0
Total Phosphorous (TP)	mg/L	1.356	10.0
Total Nitrogen (TN)	mg/L	22	20.0
Bact: Faecal Coliforms	CFU/100Ml	555	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of Colour and TN as compared to the National Standards for Environmental water
ANALYSED BY: Robinah Mutheirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department
NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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WRAB3: Kicukira (KIC)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: Kicukira (KIC)
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	Kicukira (KIC)	National Standards for Environmental Water.
WS Sample Nr	--	K3974/17/C/B	
Total Suspended Solids (TSS)	mg/L	18	100
Alkalinity: Total	mg/L	24	800
Nitrate	mg/L	0.02	10.0
Colour (apparent)	PtCo	284	500
B.O.D	mg/L	1.86	50
COD	mg/L	22	100
Calcium: as Ca^{2+}	mg/L	3.2	Not specified
Iron: Total	mg/L	0.519	10.0
Ortho-Phosphate: Reactive	mg/L	0.134	5.0
Fat, Oil & Grease (FOG)	mg/L	0.01	10.0
Total Phosphorous (TP)	mg/L	0.379	10.0
Total Nitrogen (TN)	mg/L	25	20.0
Bact: Faecal Coliforms	CFU/100mL	345	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of TN as compared to the National Standards for Environmental water
ANALYSED BY: Robinah Mukeirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department
NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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WRAB4: Kibambara valley dam (KVD)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug
Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: KVD
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	KVD	National Standards for Environmental Water.
WS Sample Nr	--	K3975/17/C/B	
Total Suspended Solids (TSS)	mg/L	156	100
Alkalinity: Total	mg/L	16	800
Nitrate	mg/L	1.11	10.0
Colour (apparent)	PtCo	1950	500
B.O.D	mg/L	7.98	50
COD	mg/L	16	100
Calcium: as Ca^{2+}	mg/L	0.0	Not specified
Iron: Total	mg/L	0.710	10.0
Ortho-Phosphate: Reactive	mg/L	0.352	5.0
Fat, Oil & Grease (FOG)	mg/L	1.10	10.0
Total Phosphorous (TP)	mg/L	1.694	10.0
Total Nitrogen (TN)	mg/L	78	20.0
Bact: Faecal Coliforms	CFU/100mL	48400	5000

Remarks:
The water sample showed complying physiochemical characteristics with exception of TN, Colour and TSS as compared to the National Standards for Environmental water. However, the bacteriological characteristics did not comply with the National Standards for Environmental water

ANALYSED BY: Robinah Mulleirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department

NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company to build a dog to conduct business

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Email:external.services@nwsc.co.ug
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WRAB5: Matyasi landing at Albert Nile (R.N)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug
Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: R.N
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	R.N	National Standards for Environmental Water.
WS Sample Nr	--	K3981/17/C/B	
Total Suspended Solids (TSS)	mg/L	14	100
Alkalinity: Total	mg/L	36	800
Nitrate	mg/L	0.01	10.0
Colour (apparent)	PtCo	55	500
B.O.D	mg/L	0.96	50
COD	mg/L	16	100
Calcium: as Ca^{2+}	mg/L	3.2	Not specified
Iron: Total	mg/L	0.014	10.0
Ortho-Phosphate: Reactive	mg/L	0.173	5.0
Fat, Oil & Grease (FOG)	mg/L	0.0	10.0
Total Phosphorous (TP)	mg/L	0.321	10.0
Total Nitrogen (TN)	mg/L	23	20.0
Bact: Faecal Coliforms	CFU/100mL	182	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of TN as compared to the National Standards for Environmental water
ANALYSED BY: Robinah Muheirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department
NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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WRAB6: Kijangi Pond (KIJ Pond)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: KIJ Pond
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	KIJ Pond	National Standards for Environmental Water.
WS Sample Nr	--	K3986/17/C/B	
Total Suspended Solids (TSS)	mg/L	317	100
Alkalinity: Total	mg/L	60	800
Nitrate	mg/L	0.15	10.0
Colour (apparent)	PtCo	1092	500
B.O.D	mg/L	6	50
COD	mg/L	48	100
Calcium: as Ca^{2+}	mg/L	6.4	Not specified
Iron: Total	mg/L	0.110	10.0
Ortho-Phosphate: Reactive	mg/L	0.335	5.0
Fat, Oil & Grease (FOG)	mg/L	1.60	10.0
Total Phosphorous (TP)	mg/L	0.520	10.0
Total Nitrogen (TN)	mg/L	41	20.0
Bact: Faecal Coliforms	CFU/100mL	1125	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of TSS, Colour and TN as compared to the National Standards for Environmental water
ANALYSED BY: Robinah Muheirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department
NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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WRAB7: Kijange Kichoke (KCK)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: KCK
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	KCK	National Standards for Environmental Water.
WS Sample Nr	--	K3987/17/C/B	
Total Suspended Solids (TSS)	mg/L	260	100
Alkalinity: Total	mg/L	88	800
Nitrate	mg/L	0.14	10.0
Colour (apparent)	PtCo	999	500
B.O.D	mg/L	15.6	50
COD	mg/L	71	100
Calcium: as Ca^{2+}	mg/L	6.4	Not specified
Iron: Total	mg/L	0.070	10.0
Ortho-Phosphate: Reactive	mg/L	0.349	5.0
Fat, Oil & Grease (FOG)	mg/L	2.40	10.0
Total Phosphorous (TP)	mg/L	0.792	10.0
Total Nitrogen (TN)	mg/L	41	20.0
Bact: Faecal Coliforms	CFU/100mL	190	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of TSS, Colour and TN as compared to the National Standards for Environmental water
ANALYSED BY: Robinah Muheirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department

NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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DATE: 7/Sept/17
EXTERNAL SERVICES

WRAB8: Kijagi Pond2 (KJPS)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: KJPS
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	KJPS	National Standards for Environmental Water.
WS Sample Nr	--	K3989/17/C/B	
Total Suspended Solids (TSS)	mg/L	118	100
Alkalinity: Total	mg/L	20	800
Nitrate	mg/L	0.05	10.0
Colour (apparent)	PtCo	283	500
B.O.D	mg/L	7.26	50
COD	mg/L	36	100
Calcium: as Ca^{2+}	mg/L	1.6	Not specified
Iron: Total	mg/L	0.155	10.0
Ortho-Phosphate: Reactive	mg/L	0.575	5.0
Fat, Oil & Grease (FOG)	mg/L	0.98	10.0
Total Phosphorous (TP)	mg/L	1.823	10.0
Total Nitrogen (TN)	mg/L	17	20.0
Bact: Faecal Coliforms	CFU/100mL	405	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics with exception of TSS as compared to the National Standards for Environmental water

ANALYSED BY: Robinah Mukeirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department

NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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EXTERNAL SERVICES

WRAB9: Kijange Road Pond (KJRP)

NATIONAL WATER AND SEWERAGE CORPORATION
CENTRAL LABORATORY - BUGOLOBI.
P.O.BOX 7053 KAMPALA.
E-mail: waterquality@nwsc.co.ug

Report on water risk Assessment

CLIENT: Albertine Region Sustainable Dev't Project
Address: Plot 9 Yusuf Lule Road
Tel: 0701221453
Email:
Date Sample Received: 30-Aug-2017

Ref No: LS098/INV/2017/962
Sampled by: Client
Type of container: Plastic
Sample Source: KJRP
Date of Report: 06-Sept-2017

Table of Analytical Results

Parameters	Units	KJRP	National Standards for Environmental Water.
WS Sample Nr	--	K3991/17/C/B	
Total Suspended Solids (TSS)	mg/L	79	100
Alkalinity: Total	mg/L	36	800
Nitrate	mg/L	0.04	10.0
Colour (apparent)	PtCo	319	500
B.O.D	mg/L	5.76	50
COD	mg/L	13	100
Calcium: as Ca^{2+}	mg/L	3.2	Not specified
Iron: Total	mg/L	0.413	10.0
Ortho-Phosphate: Reactive	mg/L	0.590	5.0
Fat, Oil & Grease (FOG)	mg/L	0.90	10.0
Total Phosphorous (TP)	mg/L	1.789	10.0
Total Nitrogen (TN)	mg/L	14	20.0
Bact: Faecal Coliforms	CFU/100mL	51	5000

Remarks:
The water sample showed complying physiochemical and bacteriological characteristics compared to the National Standards for Environmental water

ANALYSED BY: Robinah Mulleirwe & Araa Kennedy

AUTHORISED BY:.....MANAGER, Central Laboratory Services

APPROVED BY:.....SENIOR MANAGER, Water Quality Management Department

NB: The NWSC certificate of analysis by no means constitutes a permit to any person or company undertaking to conduct business

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EXTERNAL SERVICES

APPENDIX 19: RECORD OF ENVIRONMENTAL FIELD PLANNING AND REVIEW MEETINGS BY SPECIALISTS

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Field Work Review and Planning Meetings

Date: 4/08/2017 Chair: Paul Okiror Location: Wanseko Trading Centre District: Buliisa

S/N	Name	Speciality	Entity	Telephone	E-mail	Signature
01	Paul Okiror	ENR/HSE	MLHUD	0782-224828	paul.okiror@gmail.com	
02	Stephen Kiggolo	Herpetology	% MAK	0772624274	Skiggold@yahoo.com	
3	KYEKYALABYE DOUGLAS	ENR/ENG	MLHUD	0701114567	dwalalbye@gmail.com	
(4)	Daniel Mulindwa	Botanist	MAK	0774867655	ddmulindwa@gmail.com	mudaniel

Agreed Actions:

(i) Ornithology assessment by Imma and team (ii) Floral assessment by Paul Okiror, Daniel Mulindwa

(ii) Limnology assessment by Henry Ocaya and County members (iv) Herpetology assessment by Stephen Kiggolo and County members

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Field Work Review and Planning Meetings

Date: 15/08/2017 Chair: Paul Okiror Location: Nanseko T/C District: Buliisa

S/N	Name	Speciality	Entity	Telephone	E-mail	Signature
01	Paul Okiror	ENR/HSE	MLHUD	0782-224828	paulokiror@gmail.com	
2	KYEKYALABYE DOUGLAS	ENR/ENG	MLHUD	0701114567	dwalabye@gmail.com	
3	Henry Ocaya	Limnology	NAFIRRI	0754972633	ocayafirri@gmail.com	
04	Daniel Mukindwa	Botanist	MAK	0752762807	ddmukindwa@gmail.com	

Agreed Actions:

(i) Flora assessment to continue. (ii) Ornithology assessment by Time and Ken

(ii) Limnology assessment by Henry Ocaya (iv) Herpetology studies by Stephen Livingstone

X

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Field Work Review and Planning Meetings

Date: 16/08/017 Chair: Paul. Okiror Location: Nanseko T/C District: Buliisa

S/N	Name	Speciality	Entity	Telephone	E-mail	Signature
01	Paul. Okiror	ENR/HSE	MLHUD	0782-224828	paul.okiror@gmail.com	[signature]
.	Daniel Mulindwa	Botanist	MAcc	0774887655	ddmulindwa@gmail.com	[signature]
03	Stephen Kigoolo	HERPETOLOGIST	C/o MAK	0772624274	skigoolo@yahoo.com	[signature]
04	Henry Ocaya	Limnologist	NaFIRRI	0754972…	ocayafirri@…	[signature]
05	KYEKIALABYE DOUGLAS	ENR/ENG	MLHUD	0701114567	dkyekialabye@gmail.com	[signature]

Agreed Actions:

(i) Limnology assessment to continue until 18/08/2017 (ii) Ornithology assessment to be concluded by 18/08/17

(iii) Botany studies to be completed by 18/08/2017 (iv) Herpetology to be completed by 18/08/2017

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Field Work Review and Planning Meetings

Date: 17/08/2017 Chair: PAUL OKIROT Location: Nanseko T/C District: Buliisa

S/N	Name	Speciality	Entity	Telephone	E-mail	Signature
01	Henry Ocaya	Limnologist	NaFIRRI	0754972083	ocayafiri@gmail..	
02	stephen KIGOOLO	Herpetologist	% MIAK	0772624274	skigoolo@yahoo.com	
3	KYEKIALABYE DOUGLAS	ENR/ENG	MLHUD	0701114567	dwalabye@gmail.com	
(4)	Daniel mukundwa	Botanist	MAK	0774807655	ddmukindwa@gmail.com	mukundwa

Agreed Actions:

(i) The team agreed to (ii) complete field work

(iii) in Buliisa by 18/08/2017 (iv)

MLHUD/MBW CONSULTING LTD/DLG/LC UPDATE OF ESIA REPORTS FOR GRAVEL ROADS IN BULISA & HOIMA DISTRICT

FIELD WORK REVIEW & PLANNING MEETING

Venue: TIK HOTEL, HOIMA
Date: 18/08/2017

S/No	Name	Specialty	Entity	Telephone	Sign
1.	PAUL. OKIROR	ENR Specialist	MLHUD	0782-224828	
2.	KYEKIALABYE DOUGLAS	ENR ENGINEER	MLHUD	0788495826	
3.	RICHARD ATUGONZA	AIR & NOISE Specialist		0772 023398	
4.	Ilumba Old Immaculate	ORNITHOLOGIST	NMNH	0772574685	
5.	Stephen Kigoolo	Herpetologist	—	0772624127	
6.	Henry Ocaya	Limnologist	NARO	0754972005	
7.	Daniel Matindwa	Botanist	MAK	0752762807	
8.	Rebecca Nakitto	Botanist	MBW	0700184328	
9.	Nampanga Exe Ntege	GT/SOCIOLOGIST	MLHUD	0779713167	

APPENDIX 20: STATUTORY PERMITS

s/No	Permit	Time	Responsibility	Issuer
1.	ESIA/BP Certificate	Prior to contract signature	MLHUD	NEMA
2.	Water Abstraction	Before commencement of works	Contractor	DWRM
3.	Wetland User Permit	Before commencement of works	Contractor/MLHUD	NEMA
4.	Forest Permit	Before commencement of works	Contractor/MLHUD	NFA/LG/Private tree farmers
5.	Stone Quarrying	Before commencement of works	Contractor	NEMA
6.	Marram Extraction permit	Before commencement of works	Contractor	NEMA/DLGs
7.	Work place permit	Before commencement of works	Contractor	MoGLSD
8.	Work permits	Before commencement of works	Contractor/MLHUD	MIA
9.	Land Acquisition certificate (Purchase/Rent Agreement)	Before commencement of works	Contractor	Land Owner
10.	Approval of Structural Plans of Workers Camp/ Storage Yard	Before commencement of works	Contractor	DLGs/ PPCs
11.	Occupational Permit	Before commencement of works	Contractor	DLG/ DHO
12.	Equipment/Storage Yard EIA Certificate	Before commencement of works	Contractor	NEMA
13.	Blasting permit	Before commencement of works	Contractor	NEMA

APPENDIX 21(A): SOCIO-ECONOMIC STAKEHOLDER ENGAGEMENT ATTENDANCE LISTS

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

DISTRICT: BULIISA DATE: 14/Aug/2017

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1	MUHEREKI LYDIA	Physical planner	0781398957	lydia.nihwezaa@gmail.com	[signature]
2	ENG. TOM NDIZALA	HIGHWAY/MEASUREMENT ENGINEER	0776483557	tomndizala@mbw.go.ug	[signature]
3	ASIGACHI OPI LUIS	GAS Eng.	0779289279	luisopi@mbw.go.ug	[signature]
4	NUWAHAMBASA YOROKAMU	SOCIOLOGIST	0772629054	nuwahambasa@gmail.com	[signature]
5	Kyewalabye Douglas	Environment Engineer (ARSDP)	0701114567	dwalabye@gmail.com	[signature]
6	MULINZI JOSELINE	Ag CDO Buliisa dc	0775908470	Joseline.mulinzi@gmail.com	[signature]
7	Atugonza John	Birds	0787785884	Atugonzab@gmail.com	[signature]
8	TUMUSIIME ASBERT	SUB-COUNTY CHIEF (KIGWERA)	0785450646	tasbert@gmail.com	[signature]
9	Daniel Mulindwa	Botanist	0752762807	ddmulindwa@gmail.com	[signature]
10	Namboodd Immaculate	Ornithologist (birding)	0772874685	oddkatutu@gmail.com	[signature]

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

DISTRICT: BULIISA DATE: 14th/Aug/2017.

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1	BARUGAHARA B.A.	DCDO	0772372098	bbarugahara@yahoo.com	[signature]
2	Tugume Berald	DNRO	0772414508	tugumeber@gmail.com	[signature]
3	MURUNGI MOSES	AG FORESTRY OFFICER	0772429015	Mukamag4290@gmail.com	[signature]
4	KASISAKI DISON	CAO	07723[illegible]	Kasisakidison@gmail.com	[signature]
5	Tumusiime Rogers	Ag Env Officer	0784-986552	musiimorogers@gmail.com	[signature]
6	SABITI TITUS	DHO	0771318449	Sabiiti@gmail.com	[signature]
7	Kabagambe Edward	SAS	0785381793	edwardkabagambe@gmail.com	[signature]
8	Kyabalire Phares	Road Inspector	0772722838	kyphares@yahoo.com	[signature]
9	Asiimwe Siraji	Ag. Engineer	0785972330	asimeji@gmail.com	[signature]
10	ALICE TERWAHE	Ass/SOCIOLOGIST	0774908246	alicenterwane@yahoo.com	[signature]

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

DISTRICT: BULIISA **DATE:** 14/08/2017

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1	MUREEBE BLAIR	DISTRICT PLANNER	0772585123	blairmureebe@yahoo.com	
2	KATUSABE STELLA	Ag Labour officer	0772392428	stonesabc@yahoo.com	
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PREPARATORY MEETING.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 14/08/2017

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	Alice Tenywa	Ass / Sociologist	0774902246	Alicetenywa@ambio.co.ug	
2.	Tumusiime Asbert	SAS Kiryandongo	0785450646	tasbert2@gmail.com	
3.	Nuwahambasa Yorokamu	Sociologist	0772629054	nuwahambasa@gmail.com	
4.	Asiachi Luis	CAO Spec.	0779289275	luisopia@wbu.co.ug	
5.	Eng. Tom Ndizaka	Highway/Measurement Engineer	0776483551	tomndizala@ubos.org	
6.	Kabagambe Edward	SAS Ngwedo	0785387093	Edward.Kabagambe@gmail.com	
7.	Kasisaki Dison	CDO	0772520762	Kasisakidison@gmail.com	
8.	Barugahara R.A	DCDO	0772372098	Bagugahara@yahoo.com	
9.	Mulinzi Joseline	Ag CDO Buliisa dlc	0759084770	joselinemulinzi@gmail.com	
10.	Mampanga Eve Nyege	GT/Sociologist ARSDP	0779713167	Evenyege@gmail.com	
11.					

NGWEDO - NDAHDAMIRE - BIKONGORO ROAD.
UGANDA POLICE

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 15th/05/2017 - 16th/08/2017.

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	MSAMBA PAUL	KIAIGA P/POST	0782846493	—	[signature]
2.	C/ASP MVANO RAYMOND	NGWEDO P/POST	0784226668	mvanoraymond@yahoo.com	[signature]
3.	L.P. OMARA LAWRENCE	OC WANSEKO	0772-834427	—	[signature]
4.	ASP Ayoo Evalyne	OC STATION BULIISA POLSTN	0788460386 0758359029	ayooevelie@gmail.com	[signature] ASP
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CSO's

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 15th – 17th

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	Asaba Harrison	Field officer	0772210885	asabaharrison@gmail.com	
2.		Kakindo orphans care			
3.	KWOLEKIYA-H-PEREZ	EX-DIRECTOR	0781437996	—	
4.		BUPASO.			
5.	KAZIMURA JOHNNY	ALBERT NILE MANAGER HOTEL	0784807059	kazimurajohnny@gmail.com	
6.	PAOLYEL MP OMENCAH	ED - BIRUDO	0772994527	paolyel@gmail.com	
7.	KABAIKARAMU VINCENT	FOCAL PERSON CIDI	0752929199	Vikabaikisa@gmail.com	
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HEALTH CENTRE —
K I's

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: 15th – 17th.

DATE:

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1	Katusabe Alice.	In-charge Kigwera	0784 845842		
2	Kitone Amos	Nursing Officer	0774351235		
3	Kazimura Alice	ART Clinic Nurse	0782306875	Kazimura.Alice@gmail.com	[signature]
4	Kutegeka Doreen	Hospital Administrator	0782878532	doreenkutegeka@gmail.com	[signature]
5	Dralega Peter	I/C Buganda HC III	0782595058	—	[signature]
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BULIISA – BUGANA ROAD

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

16th/08/2017

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: BULIISA LC / VILLAGE: Kichonce

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	ALINAITWE ALFRED	Mubaka	0789050336	olinairwedfred2@gmail.com	
2.	MAGEZI IKASTON	IKASTON Mubaka	0783186842	—	
3.	KATUSIIME DAVid	C.P. N.R.M	0787336570	—	
4.	NDOROLIRE GRACE	TREASURER L.C I Bugana	0783782419		
5.	OPIO FRANCIS	V/C/MAN L.C I B/Kic	0785828500	—	
6.	BALIKE KASONO	Murtaka	0781947464	—	
7.	MPAIRWE SAYUNI	Mutaka			
8.	AMANYA LYDIA	C/P B H III	0777319150		
9.	KUSIIMA DOREE	Mubaka	0786783703		
10.	Businge WILSON	Mubaka	0783195818	—	

Ndadamire - 16/08/2017 Bikoigoro - Ngwedo LC [illegible]

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: KIGWERA

LC / VILLAGE: KIGWERA NE KIGWERA S.E

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	IGAHWA ZIDORO	Coment L.C NO East	0779408848	- - -	Kah
2.	BYARUHANGA CHARLES	C/MAN LCI K.S. [illegible]		0783720638	[illegible]
3.	RICHARD BYENKYA	DEFANCE	~~07228~~	077866998	Rwa
4.	BYARUFU JACKSON	V/MAN		0778508406	J.B.H
5.	MUGISA GODWIN	SEC FOR YOUTH	—	—	[illegible]
6.	BIGIRE B. PETER	Secretary LCI	0781173244		Biyei
7.	BYARUFU STEPHEN	DEFENCE	0771428861		ByaS.
8.	BIKANGA MARK	SEC FOR YOUTH	077318466	Markbikange2016@gmail.com	MARK [illegible]
9.	TUMWESIGE VICENT	TEACHER Kiliima P/S	0778254960	tumwesigevicent@gmail	[illegible]
10.	KATWESIGE MACRIS	TEACHER KILIIMA P/S	0779923392	@Katwesigemacris6@gmail	[illegible]
11	ALINAITWE HAPPY	TEACHER KILIIMA P/S	0773494362	-	[illegible]
12.	KIIZA NORMAN	TR. KILIIMA P/S	0773-587591	Kiizanorman72@gmail	[illegible]
13	TIBAIJUKA HERBERT	H/TEACHER KILIIMA P/S	0789567034		Herbert
14	[illegible]	[illegible]	[illegible]		

16/08/2017 Ndadamire — Bikongoro — Ngwedo Road.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: KIGWERA & NGWEDO

LC / VILLAGE: KIBABURA & BIKONGORO

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	BIKOBO ALEXANDRI	BIKONGORO	0773484829		[signature]
2.	MWIJAKUBIGLBERI		0770783913		[signature]
3.	Tumdulu Solomon	Kibambura	0781316212		[signature]
4.	BABYENDA Edson	KIBAMBURA	0777078841 0756131063		[signature]
5.	AMANYA C. N. COSTANCE	KIBAMBURA	0772960467 0773484106		[signature]
6.	KINTABOINE SAMSON	Bikongoro	—		K S
7.	GLADYS KAHERU	C/P LCI Bikongoro	0783482493		[signature]
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 16/8/2017 Kisomere Primary School Nguerdo Sub-County

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	Nkasi Salci Monica	Teacher	0781293734	–	
2.	ONGEI JEITHONE	Teacher	None	–	
3.	NYANGWA SIMON	TEACHER	077799612	–	
4.	OKELLO TOMMY	TEACHER	0782478237	–	
5.	WANBERA PATRICK	HEAD TEACHER	0770715772	–	
6.	Opiom James	TEACHER	0777114962	–	
7.	LEKECAN GODFREY	TEACHER	0779591152	–	
8.	MUGIZIBWE FRANK	TEACHER	0783469869	akugizibwe83frank@gmail.com	
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 16/08/2017 Ndadamire Primary School. Kigwera Sub-County

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	NTEGEKA John	Teacher	0777506402		
2.	AKUAIZIRWE SYLVIA	Teacher	0783927874		
3.	Kuganza J	Deputy	0773250336	Kjosephine.gmail.com	Kuga
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 16/08/2017 Ndadamire Primary School - Kigwera Sub-County

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	MURUNGI ROBINAH	Teacher	0787652658		
2.	BAMUTURAKI WILLIAM	& SMC Member	0774789620		
3.	BALIMWIJUKA MOSA	TEACHER	0781361559		
4.	BINGI HILLARY	TEACHER	0789981829		
5.	TUMUSIIME DAVID	TEACHER	0785448485		
6.	Adule Nerikiso	TEACHER	0784382124 0750893373	Adule.narik@yahoo.com	
7.	ENIARU SCOVIA	TEACHER	0781221913		
8.	MUHANDI BALAMU	TEACHER	0775006037		
9.	SUNDAY RICH	TEACHER	0774408379		
10.	BAMUTURAKI ROBERT	TEACHER	0772867004		
11.	KAMANZI ZAKIUL	TEACHER	0787063377		

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 16/8/2017. Kijangi Primary School SMC Buliisa Sub-County.

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	Nyamazabo Gilbert	parent	0779913478		[signature]
2.	Kusemererwa Oliva	"	—		[signature]
3.	Nyamazabo Zabuloni	Parent	—		[signature]
4.	Mufumuzza CHARLES	SMC	0782859042		[signature]
5.	KIIZA MAUREEN	TEACHER	0775007048		[signature]
6.	UKETI WILSON	V/c.PERSON L.C.I KIJANGI	0782124001		[signature]
7.	Agaba M. Wilfred	Parent.	0781014693		[signature]
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 16/08/2017 Kibambura Primary School - Buliisa Sub-County

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	TULEWA ROBERT MWESINGWIZI	D/H/Teacher	0763209266		
2.	ENYANG DENIS	TEACHER	0780346679		
3.	MUGISA CLEOPHAS	TEACHER	0778922461 0751435716		
4.	ASIIMWE JOLLY	TEACHER	0789569012		
5.	MUHIGWA JULIUS	TREASURER SNV	0780443150		
6.	ASIBAZIRYO KNIGHT	TEACHER	0783794655		
7.	AYESIGA MILDRED	TEACHER	0787878501		
8.	KABONESA SOPHIA	H/TEACHER	0782564014		
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 16/8/2017 Kijangi Primary School - Buliisa Sub County

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	MUGASA BEATRICE	TEACHER	0782849411		
2.	AJALISINGUMA S	"	0775105559		
3.	AVAGA KENNEDY	TEACHER	0778091411		
4.	SUNDAY SOLOMON	"			
5.	KASANGAKI ABIBU	TEACHER	0785459542		
6.	MUGUME GILBERT	TEACHER	0786696355		
7.	AKUIECH RAPHAEL	TEACHER	0774852197		
8.	Balikenda N. Deogratias	Head Teacher	0782707507	Balikendands@gmail.com	
9.	MWAKALI GODFREY	TEACHER	0776154993		
10.	Kyamanywa	CEREAD	—		
11.	Kyomya	Ambere	0788770921		

PWDs

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

DATE: 17/07/17

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	ASIIMWE SHADRACK	MALE COUNCILLOR PWD	0773516971	—	[signature]
2.	Mbabazi Doreen	Female councillor	0771687968	—	[signature]
3.	Kabakama Evalin	Femalle counller PWD	0783494414	—	Kabak
4.	ATIMANGO GRACE	Femalle councllor	0787886659	—	[signature]
5.	CWINYAAI CHRISTPORE		0788398280	—	[signature]
6.	SABITI MICHAEL	MALE COUNCILLOR	0771454680	—	[signature]
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17th/04/2017.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: BULIISA LC / VILLAGE: KISANGI

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	UKETI WILSON	Y/C. PERSON L.C.I	0782124001		
2.	MUSINGUZI MARIAS	Resident	0781578839	—	
3.	BUSOBOZI GERALD	Far Famer	0775086435	—	
4.	Mukitale Christopher	Farmer	0774179752	-do-	
5.	TUMWESIGE KENNETH	Resident	0781316301	Tukeke92@gmail.com	
6.	RWABITA NELSON	Farmer	0779712519	—	
7.	ASIIMWE GILBERT				
8.	Atuhaire Robina	Resident			
9.	Tumwesige Bright	Student	0771974217	BRIGHT	
10.	Balyesima Betrand	Resident			
11	Kasangaki Stephen	Sec. for Diganda LCI	0772180543	-do-	

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

DISTRICT: ----------

DATE: 17th/08/2017

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1	MUKONYEZI N. EUNICE	HEADTEACHER	0772989934	KIGOMBA PUBLIC	
2					
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Main PHA's
BULIISA HEALTH CENTRE IV

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: ---------- **LC / VILLAGE:** 14th - 08 - 2014

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1.	Kato Steven	PHA	0782042743		
2.	MUHAMBUR A FRED	PHA	0786488526		
3.	KYOMUHENDO GT	PHA	0780347202		
4.	MOSES JACANYA	PHA	0787866853		
5.	OWEGI ANDREW FRANCO	PHA	0784708051		
6.	BAGAMBISA WALAI	PHA	0778778665		
7.	OKOK FRED	PHA	0779971728		
8.	RUBASA KENEDIS	PHA	0777112284		
9.	NTAKIMAIVEY IBRAHIM	PHA	0777867797		
10.	MUZE SALMON	PHA	0780414705		

PHAs
FEMALES BULIISA HEALTH CENTER IV.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGIONAL SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UPDATING FEASIBILITY, ESIA, RAP, AND ENGINEERING DESIGN REPORTS IN COLLABORATION WITH HOIMA AND BULIISA LOCAL GOVERNMENTS

ATTENDANCE LIST FOR PERSONS CONSULTED

SUB COUNTY: 17th - 18th **DATE:** 17th - 08 - 2017

S/N	NAME	DESIGNATION	CONTACT	EMAIL	SIGN
1	KARUNGI FLORAH	PHA	—		
2	ASABA JENIPHER	PHA	0776949816		
3	KATUSIME JUDITH	PHA	0781292250		KATUSI
4	KIMULI IMMACULATE	PHA	0757596610		
5	LEMBERACH ANNET	PHA	—		
6	BIRUNGI SARAH	PHA	0771423075		BIRUNGI
7	KATUSABE HARRIET	PHA	0781597127		
8	DOROKA AGASI	PHA	—		
9	NYANGOMA RUTH	PHA	—		
10	PARAKOCHI JENINI	PHA	—		

FGD 17/8/2017

GIRLS BUGAKA P/S

mbabazi	Brenda	p.5 Class
AHIMARUGO	GRACE	P.5 CLASS.
GIFT	ZULAIKA	P.6 CLASS
KYALISIIMA	CHAKILLAH	P.6 CLASS
AKUGIZIBWE	WINNIE	P.6 class.
KATWESIGE	PROSSY	P.7 CLASS.
BABYESIZA	FLAVIA	P.7 CLASS
KABARUNGI	MEBLE	P.7 CLASS.
BAZIZANE	AIDAH.	P.6 CLASS.
BAGUMA	DOREEN	P.6 class.
ATUHAIRWE	JOVIA	P.7 Class.
ABIGABA	EVERCE	P.7 class.

FGD

BOYS BUGARAMA P/S

17/8/2017

1	TUMUKUNDE	ELVIS	P.7
2	WAMANI	WILSON	P.7
3	KIRUNGI	GEOFREY	P.6
4	TUMUHAISE	ALEX	P.7
5	ORYEMA	GEOFREY	P.5
6	ASIIMWE	MOSES	P.6
7	MUGANYIZI	EDWIN	P.5
8	TUMWEBAZE	PIUS	P.6
9	MUNEZA	MOSES	P.6
10	AJUNA	BISOBORWA	P.6
11	BOGERE	GILBERT	P.7
12	TUMWESIGE	DERICK	P.7

BUGANDA 17/4/08 PRIMARY TEACHERS [illegible]

1	OBOTH	STEPHEN	
2	ALINAITWE	ALFRED	
3	BAGUMA	DAVID	
4	ACUROBWE	MICHEAL	
5	AGUMA	ANDREW	
6	DHIKUSOOKA	HENRY	
7	AKUGIZIBWE	CAROLINE	
8	KOBUSINGE	JAMILA	
9	TUMWESIGE WRIGHT	GERALD	

Kibambura primary primary school

1	NAMAKWLA	MAIARA WITNET	P.6
2	AKLIGIZIBWE	THOPACHU JOLLY	P.6
3	KAAHWA	FAITH	P.7
4	ALINDA	ROBIN	P.6
5)	ANBAELL	GIFT	P.5
6)	ATUHURA	JOAN	P.6
7	KYOSABA	DAPHINE	P.6
8)	KUSIIMA	NAKILYA	P.6
9	KYOMUHANGI	CATHY	P.6
10	KIMULI	VIOLET	P.6
11	BIRUNGI	LILIANE	P.7
12	KEMBABAZI	PHIONA	P.7
13	ANDRUDTH	HAPPY	P.5
14.	KYOSABA	PROSSY	P.7

FED - BOYS

Kibamburo PU

MUHEREZA	DERICK	P.6.	
- KYALIGONZA	CALVINE	P.7.	
NTAKIMANYE	BONEFENCE	P.6.	
MUHANGI	JULIUS	p.6	
ILUMUSIIME	MILS PADDY	P.7	
ALIGANYIRA	FILLY	P.7	
ASIIMWE	COLLINE	p.7	
ALINAITWE	RONALD	P.6	
KUZA	NUBERT	p.6	
MBOINEKI	REAGAN	P.6.	
MUGUME	COSMA	P.6.	
TUMWINE	JOEL	P.6	

FGD - Girls Kusmore P/S

[redacted] [redacted]

1 Mwiyo Elwiyo NAIMA P.5
2 - Bidong Agness P.6
3 Oyityo TRUEcy
4 Aluhiriwe Monica GIFT P.5
5 - Ayomi Rwoth winnie P.5
6 - Mungurnek GRACE P.6
7 - Aluhiare BRENDA P.5
8 - Kwiyccwiny LILIAN P.5
9 - Ayiyo Rwoth Gloria P.5
10 - ONGIERA CHRISTINE. P.6.
11 - KAYENY AGNESS P.6
12 Ajiyorwoth Immaculate P.6

FGD

BOYS - KUDMARE P/S

MUGISA JULIUS.

MUSANYIZI MAWIN-

MUNGU JAKISA ISA.

ALINAITWE SAFICK

OTOYI CHARLES.

PARAKOCH ROGGERS.

JARYEKO ALFRED.

MUNIGURUMO WALTER.

RWOTH OMIO WILLFRED

NDANDAMIRE PJS
FGD - BOYS

1. MWESIGYE CALLEB P.7
2. BABIHEMAISO BRIAN P.7.
3. AYESIGA MAXWELL P.7
4. MUGUME Julius P.7
5. Baguma patrick P.7
6. Ssaibu IVAN P.7
7. Kyomugisa Kevin P.7
8. [illegible] [illegible] P.7
9. MATHEW MATHIUS P4
10. AKANDWANAHO ISAAC P.7
11. TUMWIINE HAMUZA P.7
12. TUMUKWASE TIMOTHY P.7.
13. KATUSIIME HILLARY P.7

GIRLS fed - Ndandamire pls

(1)	KATUSABE	NURSY P.7
(2)	MBABAZI	WINNIE P.7
3	MERCY	LYDIA P.7
4	ARORA	DAPHINE P.7
5	KYALISIIMA	GODDEY P.7
6	BAMUREKE	KEREN P.7.
7	KOBUSINGE	PATIENCE P.7
8	BIRUNGI	GLORIA P.7.
9	TUMUHAISE	PETRALINA P.7
10	SIYAMA	SHAMIM P.7
11	BIRUNGI	SHARON P.7
12.	Abayo	violet P.7

Ijangi Primary School - 16/8/2017.

Girls.

IUGANIRE	VIOLET	P.7.
SIRUWAI	MEDIAS	P.7.
ATUGONZA	JOAN	P.7
NSEMERERWA	WINNIE	P.7.
AHAISIBWE	GLORIA	P.7
~~Kyomu Agiro~~	Brenda	P.7

Boys.

Matsimuza	NORMAN	P.7.
Abikuba	Henry	P.7
mugisa	colvin	P.7.
Tumwesige	pius	P.7
Balikenda	silvest	P.7
MURUNGI	JACKSON	P.7
MUJUNI	PATRICK	P.7

BUGUNGU SECONDARY SCHOOL

GIRLS

Name	CLASS	AGE	SIGNITURE
1. KAHUA MODESTA	S.2	16yrs	
2. MBABAZI ROSSET	S.2	17yrs	
3. ATUHAIRE FELISTER	S.2	16yrs	
4. BIRUNGI ROSET	S.2	17yrs	
5. AHEEBWA DAPHINE	S.2	17 yrs	
6. KUSEMERERWA CAROLINE	S.2	16 yrs	
7. BIRUNGI SARAH	S.1	16 years	
8. ATUGUHANYIRE SILVIA	S.1	16 years.	
9. NYAKATO JOLLY	S.1	17 years	
10. KUSEMERERWA WINNIE	S.1	17 years	
11. KUSEMERERWA ROSE	S.3	16 years	
12. KATUSIIME DAPHINE	S.3	17 year	

Bugungu S.S.

Teachers.

No.	Name	Designation	Tel.	Sign
1.	RUMBIHA SAMUEL	HEAD TEACHER.	0782699888	
2-	OSILIMONG LEO ROBERT	AG DHIT.	0783487466	
3.	Nimungu Alfred Gavin	Teacher	0774882281	
4	BUSINGE FRED KYOMYA	TEACHER	0785279196	
5	Simalo Hassan Abdallah	Teacher	0778964742	
6	KYALIGONZA ~~ADIDAS~~	Teacher	0779400603	
7	BYEIMA TUNDULU	SECRETARY	0779129909	
8	MBABAZI ALFRED	LIBRARIAN	0780343327	

BUGUNGU SENIOR SECONDARY SCHOOL
17/8/2017.

No.	NAME:		CLASS	AGE	SIGNATURE
1.	IKIAMANI	LAWRENCE	S.3	17	
2.	MUGUME	BRIAN	S.3	18	
3.	BINOGOMA	EDWARD	S.3	18	
4.	TIBEJUKA	JUNIOR	S.2	16	
5.	BUSINGE	WANI	S.2	17	
6.	AGONDEZE	BRIAN	S.2	18	
7.	TWINOMUGISA	EDMOND	S.2	16	
8.	BYARUHANGA	PASCAL	S.2	18	
9.	TUMWINE	VICTOR	S.3	16	
10.	KIIZA	MOSES	S.1	15	
11.	WASUGIRYA	STEWART	S1	16	
12.	AYESIGA	DIVAS	S.1	17	

APPENDIX 21 (B): COMMENTS FROM NATIONAL STAKEHOLDER ENGAGEMENTS

Stakeholder Category	**Ministry of Water and Environment**
Name and Title of Stakeholders	Name: Ms. Maureen Anino Tittle: Principal Environment Officer Tel : 0775 567014
Name and Title of Facilitators/Enumerator	Name: Luyiga Patricia (Ms.) Tittle: Graduate Civil Engineer Tel:0704 251725
Engagement Venue	MoWE Offices, Luzira
Engagement Dates	1st March 2018
Dimension	**Key Issues / Concerns**
Specific water and environmental risks in the Albertine Graben Region to be conscious about	1. Sensitive ecosystems that is wetlands, forests, rivers, and lakes most of which are trans bound (shared with other countries). These include L. Albert, L. George and the Albert Nile and the incase of the need to get water from these resources by the contractors during implementation, permission is equally needed from the other countries. 2. Biodiversity issues: The Albert Graben Region is the most species rich area in the country and among the most species rich areas in the world hence the presence of quite a number of game parks. 3. Increased water consumption 4. Increased population (most times unplanned settlements) 5. Increased pollution of the environment as a result of the increased oil and gas economic activities.
Measures taken to protect the ecosystems	1. Sensitize the communities. 2. Open boundaries of the various ecosystems for example buffer zone for the lakes is 200m and for the rivers is 100m. 3. Come up with management plans.
Criteria taken during the implementation of the fish farming project on Lake Albert?	1. Carry out the EIA 2. Consider other activities taking place on the lake to avoid pressure on the lake. 3. Sensitize the communities on how to use the landing sites (avoid the buffer area). 4. Set up proper facilities; waste management.
How best the project can ensure compliance before, during and after project implementation	1. Must do the EIAs and strategic Environment Assessments. 2. Must do EIAs for each and every project 3. Involve personnel from MoWE for guidance during field work.

	4. Obtain the shape maps of all water resources with GPS points from the ministry. 5. Avoid the sensitive areas
How MoWEcan best be involved for effective project implementation	1. Involve personnel from MoWE for guidance during field work. 2. Obtain the shape maps of all water resources with GPS points from the ministry. 3. Available to participate in the EIA Consultation meetings and presentations for their input when called upon.
Social risks that may be encountered during project implementation	1. Displacement of people. 2. Increased population (Influx of people in the region). 3. Unplanned settlements. 4. Increased crime rate. 5. Increased domestic violence. 6. Increased HIV prevalence. 7. Increased cost of living resulting from increased prices. 8. Increased accidents on the roads.
Mitigation measures	1. Sensitize the communities. 2. Carry out a RAP to handle all issues of compensation and resettlement. 3. Put measures on the roads during and after construction to curb road accidents.
How MoWE can best contribute to social economic development within the Albertine Region	1. Available to be part of the EIA process 2. Continually guide the communities on usage of the natural resources in the area. 3. Putting in place water supplies (in the small water towns).

Stakeholder Category	**Environment Police Protection Unit**
Name and Title of Stakeholders	Name: David Dauna (Mr.) Tittle: Liason's Officer Tel: 0774 595686
Name and Title of Facilitators/Enumerator	Name: Luyiga Patricia (Ms.) Tittle: Graduate Civil Engineer Tel:0704 251725
Engagement Venue	EPPU-NEMA Offices
Engagement Dates	2nd March 2018
Dimension	**Key Issues / Concerns**
Specific environmental risks in the Albertine Graben Region to be conscious about	1. Roads create direct/easy access to wetlands, Lakes Rivers and forests. 2. Markets increase litter and waste discharge into the environment. 3. Noise pollution from the construction activities. 4. Air pollution from emissions 5. Displacement of habitat for wildlife in National Parks.
Precautions/Measures taken to conserve the environment.	Undertake Environmental Impact Assessments (EIA) before project commencement and adhere to the set conditions in the EIA.
Some of the penalties given to persons who encroach on the lakes, forests and wetlands	1. Fines 2. Imprisonment. 3. Order to restore.
How best the project can ensure compliance before, during and after project implementation	1. Before: Undertake EIA. 2. During: Follow EIA Conditions. 3. After: Implement mitigation measures and undertake Audit Inspections.
How best EPPU can be involved for effective project implementation	1. Before: Involved to do community policing. 2. During: Involved to do monitoring and surveillance through Patrols, investigate and also prosecute. 3. After: Involved to enforce the environmental laws.
Best environmental practices that can be undertaken during project implementation	1. Restorations of degraded environment 2. Rehabilitations 3. Sensitizations
Any other issues	Prioritize environmental issues for project sustainability
Social risks that may be encountered during project implementation	1. Sex trade. 2. Addictive habits like smoking and drunkardness.
Mitigation measures	1. Create awareness.
How EPPU can best contribute to social economic development within the Albertine Region	Protect the environmental resources for sustainable projects.

Stakeholder Category	**National Environment Management Authority**	
Participants	**Name**	**Tittle**
	Waiswa.A. (Mr.)	Director EMC NEMA
	Leila AkelloGonasa (Ms.)	SEAO NEMA
	Richard Mugambwa (Mr.)	EI NEMA
	Charles Nyakwebara (Mr.)	Consultant Physical Planner (PRAID Consultants Ltd)
	Vincent B. Byendaimira (Mr.)	Project Coordinator ARSDP
	Kaganzi Emmanuel (Mr.)	ACPP MLHUD
	Awuzu Wilson (Mr.)	SUO MLHUD
	Maria Nanteza (Mr.)	Ag.Environmental Officer MLHUD
	Wandukwa Emma (Mr.)	Graduate QS/MLHUD
	Kyewalabye Douglas (Mr.)	GT/MLHUD
	Were Betty Shirley (Ms.)	Trainee NEMA
Name and Title of Facilitators/Enumerator	Name: Paul Okiror (Dr.) Tittle: Project Environment Specialist	
Engagement Venue	NEMA Board Room	
Engagement Dates	26th February ,2018	
Dimension	**Key Issues / Concerns**	
ENVIRONMENT		
FISH CAGES	MAAIF should be consulted on fish farming since it is well equipped in fishing related area. Emphasis was made on community involvement **Management of cages** • Considerations of training operators to manage and operate cages to achieve goodqualityproduction. • Regular monitoring especially on water quality.	
SLAUGHTER HOUSES	• Avoid construction of slaughter houses in residential areas. • Regular monitoring of quality of meat at the slaughter houseas a good practice. • Waste management at the facility should be put in consideration. Wastes that include running water and solid waste among others. Proper drainage should be considered during the design stage of the facility**.**	
REHABILITATION OF Buliisa DLG	• Take into account all the Environment &Social issues for example source of construction materials among others.	
MARKETS	• Location of market sites is critical stage. This should be done in consideration of community ideas obtained through adequate consultations. • Conducting Environmental and Impact Assessments to guide before and during implementation to monitor compliance. • Waste management systems should be put in place consideringwaste generation, transport and disposal.	

	• Ensure contractor compliance in areas to do with occupation, health and safety • Environment and Social safeguards reports should be discussed in the site meetings during monitoring activities.
ROADS	• RAP must be prepared to manage compensation related cases. • Relocation of utilizes and services should be critically considered to minimize budget overruns. • Management of contractors through regular monitoring especially on quarry activities where liability lays on the certificate holder not sub-contractors.
Physical Planning	• There is need to obtain permits for regulated activities for example construction activities for both commercial and residential. • Comprehensive planning and dissemination of approved plans. Trainings on physical panning should be considered to ensure organized developments in the area.
SOCIAL ISSUES	
• ESMPs should be on site and avoid relying on monthly reports • Gender mainstreaming should be looked at with emphasis on major roles not only the numbers of females and males. • Drainage should be considered in the designs for ease of implementation • Flora and Fauna should be in the assets for example Air quality • Consider physical health relationships • Restoration and decommissioning of plans should beconsidered especially in the budgeting.	
Recommendation	Involvement of NEMA Regional Offices

Stakeholder Category	**Ministry of Gender, Labor and Social Development. (MGLSD)**
Name and Title of Stakeholders	Name :Musinguzi Karl Marx (Mr.) Title : Senior Labor Officer/Employment Tel: 0703 044243
Name and Title of Facilitators/Enumerator	1. Name: Doreen Kembabazi (Ms.) Title: Sociologist Tel: 0700 776245 2. Name: Nampanga Eve Ntege (Ms.) Title: Graduate Sociologist Tel: 0779 913167
Engagement Venue	Cariboo Restaurant
Engagement Dates	28th February ,2018

Key Issues / Concerns

Before Construction

- SIAs should be taken before project implementation.
- Social Safe guard's issues like how communities are likely to be affected negatively by the project. If the communities are to be displaced during project implementation process what remedies have you put in place to address such.
- Environmental issues like dust that may be raised during road woks that might affect the communities around the project area and the workers themselves. There is need to ensure that workers are provided with protective gears and for the communities around contractor needs to ensure waters drive ways to reduce on the dust.
- There is need to ensure that families are not left disrupted.
- Children rights to education needs not to be out layed. Children in UPE schools have a tendency of trying to get out of school because they want to get employment on road projects.
- There is need to ensure that the local communities get jobs during the implementation of the projects. Ensure that communities get decent jobs, decent wage, social protection such as social insurance schemes, their remittances to NSSF should be made.
- Communities should get local tenders not all tenders to be taken by foreign countries.
- Consider employment out comes even after the project

During Construction

- There is need to ensure that labor clauses in the contract document are adhered too. What is the wage structure like in the contract document and what are the terms and conditions? For example if you say you are to pay 20,000/= per day ensure that the contractor is conforming to it. If a contractor is supposed to provide protective gears to the workers, ensure that he/she has provided them if the contract document says 50% of the jobs are to be given on a gender equity basis ensure it is done so.

- Ensure that there is Multi-sectorial inspection of the project. Let all stakeholders be involved during the project monitoring process. Ensure that Gender Audits, social Audits employment outcome audits are undertaken.
- Need to consider sustainable project interventions. For example, creation of a social to ensure that trees are planted and maintained alongside the road even after when the project has closed. Need to ensure that the skills developed during project implementation, one should be able to see at a certain level improvement of House hold income.
- For sustainability purposes, there is need to ensure that the capacities of the local communities are well built, so that the talents acquired can be sourced during the implementation of other similar projects an example of the Kenyan Standard Gauge Railway Project was given where a talent register was created and it is from this that some of the workers will be recruited in Uganda.
- Gender sensitivity should be mainstreamed in the communities at all levels.
- Child labor issues should be taken care of. Ensure that children below 14 years are not employed on the project and if employed, should be given light work and they should be under critical supervision.
- Ensure there is no segregation / marginalization of worker. For instance, failure to recruit someone because he/she is HIV infected.
- The Ministry of Gender Labor and Social Development ensures that workers have labor justice during project implementation. There are different policies in the Ministry that need to be internalized in relation to this. These include workers compensation of 2000, the Labor Union Act and Occupation Health Act that stipulates issues to do with protection of workers.
- Need to ensure equality in compensation in case there is need. There is need ensure that the communities are not defaulted of their land.

Mitigation Measures

- Ensure social protection and these include; occupational skills development, social security benefits, training of the communities and workers on dangers in work places.
- Address the issue of children running away from school. Ensure there are bylaws in place to address such.
- Involve the Ministry of Gender Labor and Social Development during inspections.
- Negotiations of labor clauses to ensure that the local communities are not exploited.
- Sensitize the local communities about these labor opportunities and also their rights.
- Ensure gender balance at all levels.
- Consider people with disabilities and avoid casualization of worker. It should be noted that after 12 weeks one is no longer a casual worker.
- Employment out comes should be documented and shared with Ministry of gender labor and Social Development.

Key issues to consider

- The Ministry of Gender Labor and Social Development has started on the process of reviewing the 2010-2020 Social Protection Policy after having realized that most projects are not considering social economic issues in their project works.
- Consult the National Gender Policy 2007.

Stakeholder Category	**Ministry of Gender Labor and Social Development**
Name and Title of Stakeholders	Name: Chris Opuch (Mr.) Tittle: SSSI – Construction unit Tel :0753 647765
Name and Title of Facilitators/Enumerator	Name: Nampanga Eve Ntege (Ms.) Tittle: Graduate Sociologist Tel: 0779 913167
Engagement Venue	MGLSD Offices - OSH Department
Engagement Dates	5th March 2018

Key Issues / Concerns

- Establishment of land ownership is key and paramount (who owns the land where the sub projects are to be established) so as not to form refugees
- Safety and Compliance
- Earmarking of road reserves
- SHE policy and plan is required to ensure Safety and Health of workers
- Ensure that Safety and Health management statements are confined within the contractor's labor plan
- Produce of waste management plans for places were sub projects are to established for example:

a. drenching on landing sites will require were to take refuse
b. Have the relevant waste disposers been engaged

- Obtaining Drainage patterns for the markets, roads to be established and rehabilitated
- Topographic interpretations for the drainage patterns are key essentials required before projects are established.
- Drainage and Building plans need to be reviewed for safety purposes (section 42 OSH Act) by MoGLSD
- Workers / service providers have to be registered by MGLSD (Section 40 OSH act)
- Traffic management lay outs are required for clear guidance on where diversions are to be located during rehabilitated, traffic load
- Indicate compensation criteria's
- Ensure availability of PPEs because they are mandatory for all workplans to ensure workers are protected from the environment
- Undertake hygienic measurements for Water quality parameters, Noise pollution and air quality levels.
- Gazette quarries from the nearest developers (500m).
- Need to alert nearest developers since Blasts are to be carried out at quarry sites
- Communities and Contractors need to be sensitized on HIV and an HIV Management formulated and distributed to the contractor

Gender Consideration

- Method statements should be developed clearly stating how PWDs, Women, Youth, Elderly, and Men are to engaged
- Risk management plan for all the scoped works need to be developedin regard of therelevance on how dangerous the activity to be undertaken is for example during blasting. categories the risks and how we intend to manage them
- Registration of quarry operators with in the area
- Under take medical surveillance of all the workers, since this complicates works on infrastructure projects
- Need to display data sheets for all chemicals to be used on site- done under the chemical surveillance unit

Mitigations and Recommendations

- Ensure that a Safety Officer is duly appointed and given his /her Terms of Reference
- Provision of Employment contracts for all the workers. Monitor whether their Remittances are duly fulfilled by the contractors as stated in their contracts
- Collaborate with the District local governments
- Considerate on how the project will support the BUBU policy
- Contractors and project implementers need to be keen of the cultural norms within the Albertine region
- Coordinating with all the relevant stakeholders and involve them consequently for corporate social responsibility
- During procurement, National gazettes CAP. Should be considered as a way of extending opportunities for the local contractors since local content is key
- Mindful of the cultural norms within the region

  How best Ministry of Gender, Labor and Social development canbe involved for effective project implementation
- During Audit /Compliance checks

Always participate when called upon

Stakeholder Category	**National Forestry Authority**
Name and Title of Stakeholders	**Name**: Rukundo Tom.N. (Mr.) **Title**: EIA & Research Specialist **Tel**: 0772-591205
Name and Title of Facilitators/Enumerator	**Name** : Nampanga Eve Ntege(Ms) **Title**: Graduate Sociologist **Tel**: 0779-913167 / 0706-416579
Engagement Venue	NFA Offices - Bugolobi
Engagement Dates	26th / February / 2018
Key Issues / Concerns Raised	

Environmental

- Asses were forests traverse
- Assess damage
- Asses Environmental economic value
- Create off sets

Social

Water collection points and other resourceful sources might be affected. Therefore

- Collaborative Forest management groups (Budongo, Bugoma) that signed MOU with NFA for joint management can be consulted to seek their opinion since there have their own interests that need to be taken into consideration (regard to social aspect)
- Communities certainly living around / alongside protected areas need to be consulted

Recommendations

- Formation of monitoring committees composed of members from different ministries and agencies for identification of potential successes and constraints to facilitate timely decisions. For example, in case there are offsets the committee intervenes for technical assistance.
- NFA needs to obtain shape files for GPS Coordinates for ease allocation of the likely forests that are endangered and might require not to be tampered with.
- Forest reserves in particular Bugoma should not be tampered with.
- In case of destruction of forests compensation should not be prohibited
- Need to work jointly through consequent engagements with the District forestry officers and Natural Resource Departments (Hoima and Buliisa)
- Contractor should not expand unnecessarily during execution of works especially in forest reserve areas
- Reduce on foot plains

Stakeholder Category	**Ministry of Local Government**
Name and Title of Stakeholders	Name: Mugumya Geoffrey (Mr.) Title: PAS MoLG Tel : 0772 465303
Name and Title of Facilitators/Enumerator	Name: Nampanga Eve Ntege (Ms.) Tittle: Graduate Sociologist Tel : 0779 913167
Engagement Venue	MoLG Offices
Engagement Dates	6th March 2018
Key Issues / Concerns Raised	
• Some of the Wetlands, Forests,and riversbelong to bunyoro kingdom; therefore the kingdom should be consulted for clear guidance. (reference following the recent sue of government by the Kingdom) • Component 2. Should pick a leaf from the previous suspension of UNRA (Component 1.) to ensure that Environmental and Social safeguards are fully attended to. Such infrastructure developments on commencement of works they attract a lot employment opportunities, that might be associated with sex trade , sexual abuse, child labour, drug addiction , among others in the due course. • Participating Local governments should be given an opportunity to supervise contractors and should be fully engaged once construction works commence • Land Acquisition is key for the sub projects to be established • Incase participating local governments are not responsiveness , MoLG should be involved • Through Quarterly meetings and Consequent engagements whenever an issue arises , MoLG should be engaged	

Stakeholder Category	**China National Offshore Oil Corporation(CNOOC)**
Name and Title of Stakeholders	1. Name: Moses Oteng (Mr.) Title: Land Acquisition, Tel : 0776798403 2. Name: Fred Ssegirinya (Mr.) Title: Senior Environment Advisor, Tel : 0772798107 3. Name: Zak Lubega (Mr.) Title: CSR/SP Manager, Tel:0772798051
Name and Title of Facilitators/Enumerator	1. Name: Mrs. Maria Nanteza. Title: A.g Environment officer(MLHUD) Tel:0755 553429 2. Name: Mr. Kyewalabye Douglas Title: Environment Engineer (ARSDP) Tel:0701 114567
Engagement Venue	(CNOOC) Headquarters, John Babiha (Acacia) Ave, Kampala.
Engagement Dates	5th March 2018

Key Issues / Concerns Raised

1. Influx of people in Buhuka village, Hoima district has been seen as the biggest challenge since CNOOC operations(camps, well pads and communities) will largely take place in that particular region.
2. The land tenure system existing in Buhuka village is communal which is spearheaded by Buhuka Communal Land Association (BCLA).
3. There is difficulty in sensitization within Buhuka due to the different ethnic groups.
4. Management of solid waste and waste water will be key to avoid contamination of Lake Albert.
5. Requirement for capacity building and training of fishermen during implementation of the landing sites and fish farming projects.
6. Requirement for a comprehensive budget of all the different economic infrastructure projects.
7. What criteria was used for the selection of economic infrastructure projects in the different districts.
8. Stakeholders need to understand the background, baseline, challenges and benefits of the project and know whether studies have been made since CNOOC selected Buhuka to do similar projects in the area.
9. What are the roles defined by MLHUD on how CNNOC will be involved during monitoring of the projects.
10. MLHUD should update CNOOC on the stages and meetings of the project.
11. CNOOC should be notified to sensitize people in their areas of operation since they are already on ground.
12. CNOOC is willing to mobile and disseminate information to different stakeholders.

Stakeholder Category	**UMEME Limited**
Name and Title of Stakeholders	1. Name : Semalulu Elias (Mr.) Tittle : Safety leader UMEME Tel : 0772 885273 2. Name : Nambi Beatrice (Ms.) Tittle : Environment Adviser UMEME Tel: 0782 969986
Name and Title of Facilitators/Enumerator	Name : Busingye Carol (Ms.) Tittle : GT/Environment ARSDP Tel: 0700 135828
Engagement Venue	UMEME Headquarters - Engineering office.
Engagement Dates	01st March,2018
Key Issues / Concerns	
1. Need for clear land Agreements in land acquisition and let the people know their implications as the have tendency of re-claiming the land in case there is compensation. 2. Within the community, at the markets, an abattoir, there could be need to extent electricity to such places and need to meet the requirements as attached. 3. There is need to ensure compliance of environment concerns in sensitive areas like wetlands where permit needs to be issued first. 4. Proper waste management is key especially the bodily waste to ensure good sanitation practices. 5. The ESMMP require close supervision and monitoring on ground. 6. With regard to social issues, the substations within the region have qualified maintenance personnel who monitor the electricity operations and the system is automated thus rare accidents happen. 7. Also, firewalls are built around substations to keep distance from homesteads to avoid emergency accidents. 8. The communities should be engaged in all activities to ensure ownership and love of the project. This will effectively lead to project success.	

Stakeholder Category	**RURAL ELECTRIFICATION AGENCY**
Name and Title of Stakeholders	1. Name : Harriet Baguma (Ms.) Title : Environment officer Tel: 0781 055051 2. Name: Grace Birikadde (Ms.) Title : Environmental Specialist Tel: 0774 180112
Name and Title of Facilitators/Enumerator	Name : Busingye Carol (Ms.) Tittle : GT/Environment ARSDP Tel: 0700 135828
Engagement Venue	Rural Electrification Agency–Safeguards Office.
Engagement Dates	13th March,2018
Key Issues / Concerns	
1. Welcomed the project and believe it will have positive impacts on people in terms of development. 2. The safeguards team should ensure proper sensitization on sexual health in general so that the local people do not contract diseases during the implementation project. 3. The contractor should employ the local people so that they can earn money from the project. 4. Incase Rural Electricity wants to extend their lines in the region, they can work with in the road reserve because it is expensive for them to shift the lines. 5. When the market needs electricity in future, the local governments should seek guidance on how to extend power in the area. 6. The communities should be engaged in all activities to ensure ownership and love of the project. This will effectively lead to project success.	

Stakeholder Category	**Uganda Wildlife Authority (UWA)**
Name and Title of Stakeholders	Name :Namara Justine (Ms.) Title : Manager EIA Tel: 0772 413432
Name and Title of Facilitators/Enumerator	Name : Busingye Carol (Ms.) Tittle : GT/Environment ARSDP Tel: 0700 135828
Engagement Venue	UWA Headquarters –EIA & Oil and gas Office.
Engagement Dates	05tht March,2018
Key Issues / Concerns	
1. The contractor should put sign posts guided by the game wardens to avoid animal kills within the region. 2. Humps should be placed in sections close to the park to reduce speeding vehicles as they enter the National park. 3. Illegal activities like poaching, smoking is not allowed in areas close to the park. Smoking can lead to fire outbreaks which can affect the national park.Therefore the contactor and his team should be sensitized on such issues. 4. There should be proper waste management like use of bins, mobile toilets in order to reduce dumping of rubbish with in the area. 5. The feeding of animals is prohibited in case they get closer to where the contactor is. **NB: No molesting of animals.** 6. When constructing the fishing cages, the team should be aware of crocodiles which are dangerous to human life. 7. In case of attack of wild animals, UWA should be immediately contacted for rescue since it works 24 hours.	

Stakeholder Category	**Department of Museums & Monuments. (Ministry of Tourism , Wildlife and Antiquities)**
Name and Title of Stakeholders	Name : Ms. Jackline Nyiracyiza Tittle: Principal Conservator. Tel: 0772 644397
Name and Title of Facilitators/Enumerator	Name : Busingye Carol Tittle : GT/Environment ARSDP Tel: 0700 135828
Engagement Venue	Uganda Museum Conservation office
Engagement Dates	23rd February,2018
Key Issues / Concerns Raised	
After a keen study of the project components,the Departmental staff noted that some of the markets being planned for construction will be in highly sensitive cultural heritage sites as indicated by literature and Museums and Monuments data base. These markets included **Bugoigo,Kigorobya and Buhuka.** The Principal Conservator Department of Museums and Monuments recommended the following for ease of the ministry to be able to give a national view on ARSDP: • MLHUD to send off a team of cultural heritage specialist / archeologists to assess the surface and underground archeology. This team will be in position to highlight mitigation measures to save the country's heritage. • Ensure that the chance Finds Procedure (CFPs) that was developed by the department of Museums and Monuments that is in line with IFC standards and WB operational guidelines be followed to guarantee preservation of the national culture heritage	

Stakeholder Category	**Ministry of Energy and Mineral Development**
Name and Title of Stakeholders	Name : Joel Tumwebaze (Mr.) Title : Health and Safety Environment Tel : 0414 320714
Name and Title of Facilitators/Enumerator	Name : Businge Carol Title : GT/Environment ARSDP Tel: 0700 135828
Engagement Venue	Kampala Serna Hotel-Turaco Hall
Engagement Dates	13thMarch,2018
Key Issues / Concerns	

- The Resettlement Action Plan needs to be harmonized to solve compensation issues in case it's needed.
- The contractor needs to have a camp in order not to mix with the local people and stress the local facilities, to avoid contracting HIV/AIDS.
- There should be dust control measure when construction activities begin to avoid pollution.
- Biodiversity offsets need to be incorporated to avoid loss.
- Since some of the roads to be rehabilitated are gravel, they won't affect the pipe line of the oil and gas manning industry.
- The contractor needs to employ the local population to incorporate issues of unemployment in the area.
- There is need to have proper health and safety mechanisms like health clinics, personnel protective equipment at camp sites.
- There should also be trafficcontrol measures and agreed time lines of working hours for example, the number of trips to make in a day, control of truck pushers.
- He advised need to harmonize with other agencies in the region like UWA to know the exact places where the animals are to avoid accidents.
- He also emphasized on waste management issues. The contractor should have good human waste mechanism in the camp and on site.
- Good water quality control is of paramount importance since it's used by both animals and plants.
- Finally, he encouraged to always seek information from the MEMD since they a lot of data following the numerous studies that have been conducted in the region.

Stakeholder Category	**National Water and Sewerage Cooperation (NWSC)**
Name and Title of Stakeholders	Name :Eng. Amayo Johnson (Mr.) Title : Deputy MD TB-BS Tel: 0751 11717
Name and Title of Facilitators/Enumerator	1. Name: Nampanga Eve Ntege (Mr.) Title: Graduate Sociologist Tel: 0779 913167 2. Name: Wandukwa Emma (Ms.) Title: Graduate Quantity Surveyor Tel: 0753 888718
Engagement Venue	NWSC Office Headquarters
Engagement Dates	14thMarch,2018
Key Issues / Concerns	
1. Sustainability should be enhanced; During implementation of infrastructure all other infrastructures dealing with utility provision should be considered to avoid compensations and allow expansions for future utilities. 2. Runoff water rates might be increased in unpaved roads during implementation and this may expose NWSC Pipes. 3. Need to consider an eco- friendly city for sustainability that is environmental friendly and climate resistant. 4. Project needs to work jointly with NWSC Hoima Regional Offices when needed 5. There might be increased water surface pollution 6. Need to draw lessons from the USMID Program 7. Need to take into consideration a lay line of equal or higher capacity to help protect the infrastructures. **NB** NWSC operates within town centers of Hoima Municipality, Masindi and does not in Buliisa and the rest of the areas where the sub projects are situated.	

Stakeholder Category	**Ministry of Trade, Industry and Cooperatives**
Name and Title of Stakeholders	Name: Mr. Kizito Suudi Title: Senior Engineer Tel: 0772 449429
Name and Title of Facilitators/Enumerator	Name: Kyewalabye Douglas Title: Graduate Environmental Engineer(ARSDP) Tel:0701114567

Engagement Venue	Ministry of trade, industry and cooperatives – Department of Industry
Engagement Dates	14th March 2018.
Dimension	**Key Issues / Concerns**
1. Slaughter house.	• Proper management of odour, solid waste and waste water. • Utilization of waste products from the abattoir i.e the blood from slaughtered animals can be dried and used for fish feeds and hides for leather. • The recovery rate of hides from slaughtering cows is very low in villages. • The cow dung from the slaughter house should be utilized to generate biogas.
2. Landing sites and fish farming	• Water used for domestic purposes around landing sites is contaminated therefore people in the area should be trained in rain water harvesting and underground water extraction. • During the fish processing stages the hygiene of the place should be considered. • An ice storage facility should be constructed in the area for preservation purposes. • The fish waste from the cages can be recycled and used for fish feeds. • HIV rates are very high around landing sites therefore communities should be sensitized regularly. • Recreational facilities around landing sites should be constructed for the youth to avoid idealness. • The Youth Lively Program should be extended to such areas to supplement on the fishing activities. • Electricity can be extended to landing sites in form of solar and hydro power.

3. Markets	• During consultations the main stakeholders are not reached and this has resulted into abandoned markets. • The location of the market should be convenient for the sellers and buyers. • More people should be encouraged in farming rather than trade of produce. • The market users should form cooperatives to easily forward their issues to high institutions/local governments. • The Ministry of Trade Industry and cooperatives sets the policies which govern use of products and they should be overseen or implemented by LGs. • The benefits of paying taxes in the markets should be publicized for the locals. • Farmers should be sensitized to avoid fake seeds and where to get good hybrid seeds such that their produce is of good value to be sold on the market. • MAAIF should be involved to enhance the production of fish and crops. • ARSDP should seek collaboration with Rural Integration Implementation Project (RIIP) under Ministry of Trade which is constructing boarder markets in the areas of Kasese, Busia and Elego. • Produce should be standardized before it reaches the various markets.
4. Roads.	• Security should be tightened to avoid theft of construction materials. • Contractors should be well managed to avoid indulging with people's wives and under aged children. • Contractors should be sensitized on HIV and encouraged to use condoms. • The locals within the area should be employed by the contractors during the construction of the roads.

APPENDIX 21(C): ATTENDANCE LIST FOR NATIONAL ENVIRONMENTAL AND SOCIAL STAKEHOLDER CONSULTATIONS

TELEGRAMS: "MINTOUR"
TELEPHONES: 0414-314000; 0414- 314257
Fax: 347286
E-mail:mintourism@mtwh.go.ug, ps@mtwh.go.ug
Website: www.mtwh.go.ug
IN ANY CORRESPONDENCE ON
THIS SUBJECT PLEASE QUOTE NO. ANT/137/ADMIN

THE REPUBLIC OF UGANDA

MINISTRY OF TOURISM, WILDLIFE AND ANTIQUITIES,
P.O BOX 4241, RWENZORI TOWERS
PLOT 6 NAKASERO ROAD,
KAMPALA, UGANDA.

28th February 2018

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
06 MAR 2018
RECEIVED

The Permanent Secretary,
Ministry of Lands, Housing and Urban Development

NATIONAL VIEW ON THE ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2.

In reference to your letter dated 21st February 2018 that was requesting the Ministry of Tourism, Wildlife and Antiquities through the Department of Museums and Monuments to give a national view on the above mentioned project.

The Departmental staff have studied the project components and noted that some of the markets planned will be in highly sensitive cultural heritage sites such as Bugoigo, Kigorobya, Buhuka as indicated by literature and Museums and Monuments date base.

I therefore recommend the following;

1. MoLHUD sends off a team of cultural heritage specialist/archeologists to assess the surface and underground archeology. This team will be in position to highlight mitigation measures to save the country's heritage.

2. Ensure that the Chance Finds Procedure (CFPs) that was developed by the department of Museums and Monuments that is in line with IFC standards and WB operational guidelines be followed to guarantee preservation of the national culture heritage.

In case you require further assistance, you may directly contact, Ms Jackline Nyiracyiza on 0772 644 397.

Department of Museums & Monuments
P. O. Box 365 or 5718
Kampala (U)

Rose Nkaale Mwanja
FOR: PERMANENT SECRETARY.

Mission: *"To develop and promote the tourism, wildlife and heritage resources for enhancement of Uganda as a competitive and preferred tourist destination, with accelerated sector contribution to the national economy".*

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP

National Environment Management Authority 26/02/2018.

S/N	Name	Position	Entity	Contact	Email	Signature
1	WAISWA.A	DIRECTOR, EMC	NEMA	0772471139	wagazikaema@ug.org	[signature]
2	Leila Akello Gonasa	SEAO	NEMA	0782730799	lakello@nemaug.org	[signature]
3	Richard Mugambwa	EI	NEMA	077377016[illegible]	rmugambwa@nemaug.org	[signature]
4	Awuzu Wilson	SLO/MLHUD	MLHUD	0772613602	awuzuwilson1@gmail.com	[signature]
5	Maria Nanteza	Ag. Envi't Officer	MLHUD	0772553429	maria.nanteza@yahoo.com	[signature]
6	Kyewalabye Douglas	ENV/ENG ARSDP	MLHUD	0701114567	dwalabye@gmail.com	[signature]
7	Kaganzi Emmanuel	ACPP	MLHUD	0772603521	Kagaemma@gmail.com	[signature]
8	Charles Nyakwebara	Consultant Phy. Planner	CPRAD Consultants Ltd. MOLHUD	0783684834	nyasug@yahoo.com	[signature]
9	Vincent B. Byendaimira	Com/Physical Plng	MLHUD	0772847262	byendaimira@gmail.com	[signature]
10	Wandwewa Emma.	O.S./MLHUD	MLHUD	0753885[illegible]	ewandwewa[illegible]@gmail.com	[signature]

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP

National Environment Management Authority 26/02/2018

S/N	Name	Position	Entity	Contact	Email	Signature
1	Nare Betty Shirley	TRAINEE	NEMA	0758556584	Nebshirley@gmail.com	Betty
2	Dr. Paul Okiror	Environmental Specialist/ARSDP	MLHUD	0782-224828	paul.okiror@gmail.com	
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

CNOOC
05/03/2018

NATIONAL LEVEL CONSULTATIONS ON ARSDP

S/N	Name	Position	Entity	Contact	Email	Signature
1	Maria Nanteza	Ag. Env't Officer	MLHUD	0772553429	maria.nanteza@yahoo.com	
2	Kyewalabye Douglas	ENV/ENG ARSDP MLHUD	MLHUD	0701114567	dwalabye@gmail.com	
3	MOSES OTENG	LAND ACQUISITION	CNOOC UGANDA	0776798483	moses.oteng@cnoocugandaltd.com	
4	FRED SSEGIRINYA	SENIOR ENVT ADVISOR	CNOOC(U)LTD	0772798107	fred.ssegirinya@cnooc.ugandaltd.com	
5	Zeak Lubega	CSR/SP Manager	CNOOC	0772798451	Zakaria.LUBEGA@cnoocugandaltd.com	
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

NFA - 26/02/2018
MGLSD - 28/02/2018
MGLSD - 05/03/2018

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP

MoLG - 06/03/2018

S/N	Name	Position	Entity	Contact	Email	Signature
1	RUKUNDO TOM	EIA SPECIALIST	NFA	0772591205	tomrenjinju.	
2	Mutinguzi Karlmax	Senior Labour Officer/Employment	Ministry of Gender, Labour & Social Dev	0712930645 / 0783044243	Karlmutinguzi@gmail.com	
3	MUGUMYA GEOFFREY	PAS/MOLG	MOLG	0772465307	gdmugumya@gmail.com	
4	CHRIS OPWETT	SSSI-CONSTRUCTION	MGLSD/OSH	0753-647765	chrisopwch@yahoo.com	
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP SUBPROJECTS IN THE DISTRICTS OF HOIMA AND BULIISA.

Ministry of Water and Environment - 01/03/2018. Environment Police - 02/03/2018

S/N	Name	Position	Entity	Contact	Email	Signature
1	Maureen Anino	Principal Environment Officer	MWE	0772567414	maureenanino2@gmail.com	Anino
2	DAUNDA DAVID	LIAISONS OFFICER ENVIRONMENT POLICE		0774593626	[redacted]	[redacted]
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP

National Water and Sewerage Corporation. – 14/03/2018

S/N	Name	Position	Entity	Contact	Email	Signature
1	Eng. Amajo Johnson	Deputy MD TB-BS	NWSC	0751117117	johnson.amajo@nwsc.co.ug	
2						
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP

Ministry of Trade, Industry and Cooperatives - 14/03/2018

S/N	Name	Position	Entity	Contact	Email	Signature
1	Suudi Kizito	Senior Engineer	MTIC	0772449429	sdkizito@gmail.com	
2	Kyuwalabye Douglas	Environmental Engineer ARSDP	MLHUD	0701114567	dwalabye@gmail.com	
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

UMEME - 01/03/2018

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

UWA - 05/03/2018

REA - 13/03/2018

NATIONAL LEVEL CONSULTATIONS ON ARSDP

MEMD - 13/03/2018.

S/N	Name	Position	Entity	Contact	Email	Signature
1	BEATRICE NAMBI	ENVIRONMENT ADVISOR	UMEME LTD	+256 782 969986	beatrice.nambi@umeme.co.ug	[signature]
2	Elias [illegible]	SAFETY LEADER	Umeme Ltd	0772885273	elias.nambi@umeme.co.ug	[signature] 01-03-20..
3	BUSINGYE CAROLINE	GT ENVIRONMENT / MLHUD ARSDP	MLHUD / ARSDP	0775428786	carolbusingye@yahoo.co.uk	[signature]
4	Justine Namara	Manager EA/om	UWA	0772413432	justine.namara@ugandawildlife.org	[signature] 5th ... 2018
5	BUSINGYE CAROLYNE	GT ENVIRONMENT / MLHUD ARSDP	MLHUD / ARSDP	0775438786	carolbusingye@yahoo.co.uk	[signature] 05-03-2018
6	Harriet Baguma	Env. officer	REA	0781055051	hbaguma@rea.or.ug	HKB 13/0..
7	Grace Birikadde	Envtal Specialist	REA	0772418912	gbirikadde@rea.or.ug	[signature] 13/0..
8	Joel Tumwebaze	HSE	MEMD	0414320714	j.tumwebaze@petroleum.go.ug	[signature] 13/0.. 2018
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

NATIONAL LEVEL CONSULTATIONS ON ARSDP

National Environment Manggement Authority - 23/02/2018.

S/N	Name	Position	Entity	Contact	Email	Signature
1	Evelyn Lutalo	Senior District Environment Officer	NEMA	0772652728	elutalo@nemaug.org	
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APPENDIX 21(D): INTRODUCTORY LETTERS FOR NATIONAL STAKEHOLDER ENGAGEMENTS

Email: mlhud@mlhud.go.ug
Telephones: General: 0414342931/3
Hon. Minister: Direct: 0414253871
Hon. Minister of State (Lands): 04143231020
Hon. Minister of State (Housing): 04143349265
Hon. Minister of State (Urban Development):0414236384
Permanent Secretary: 04143230879
Under Secretary: 04143236359
Fax: 04143230891
In any correspondence on this subject please quote No
ADM/38/90/03

THE REPUBLIC OF UGANDA

Uganda Vision 2040

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
P.O. BOX 7096
KAMPALA, UGANDA

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)
23 FEB 2018
RECEIVED

February 21, 2018

The Executive Director,
National Environment Management Authority (NEMA)

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2

Consultations to Update Environmental and Social Management Plans for Rehabilitation of Gravel Roads and Construction of Local Economic Infrastructure in Buliisa and Hoima Districts

The Ministry of Lands, Housing and Urban Development (MLHUD) is implementing component 2 of the Albertine Regional Sustainable Development Project (ARSDP) with the funding from the World Bank (IDA) and the Government of Uganda. Component 2 of the project is focusing on physical planning, rehabilitation of rural roads and construction of economic infrastructure which include markets, fish landing sites, and slaughterhouses/ abattoirs in three Local Governments (Hoima District, Buliisa District and Buliisa Town Council).

The Ministry has arranged an in-house team together with the District Local Governments to undertake National and Local consultations on Environmental and Social safeguards that might be triggered by the project to update the

Email: mlhud@mlhud.go.ug
Telephones: General: 0414342931/3
Hon. Minister: Direct: 04143253871
Hon. Minister of State (Lands): 04143231020
Hon. Minister of State (Housing): 04143349265
Hon. Minister of State (Urban Development):0414236384
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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
P.O. BOX 7096
KAMPALA, UGANDA

February 21, 2018

THE COMMANDANT ENVIRONMENTAL PROTECTION POLICE UNIT
26 FEB 2018
P.O. BOX 7055 KAMPALA

The Head Environment Protection Unit,
Uganda Police Force.

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
Consultations to Update Environmental and Social Management Plans for Rehabilitation of Gravel Roads and Construction of Local Economic Infrastructure in Buliisa and Hoima Districts

The Ministry of Lands, Housing and Urban Development (MLHUD) is implementing component 2 of the Albertine Regional Sustainable Development Project (ARSDP) with the funding from the World Bank (IDA) and the Government of Uganda. Component 2 of the project is focusing on physical planning, rehabilitation of rural roads and construction of economic infrastructure which include markets, fish landing sites, and slaughterhouses/ abattoirs in three Local Governments (Hoima District, Buliisa District and Buliisa Town Council).

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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
P.O. BOX 7096
KAMPALA, UGANDA

February 21, 2018

The Permanent Secretary,
Ministry of Local Government

MINISTRY OF LOCAL ... 23 FEB 2018 KAMPALA MINISTRY Hqr. ...

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2

Consultations to Update Environmental and Social Management Plans for Rehabilitation of Gravel Roads and Construction of Local Economic Infrastructure in Buliisa and Hoima Districts

The Ministry of Lands, Housing and Urban Development (MLHUD) is implementing component 2 of the Albertine Regional Sustainable Development Project (ARSDP) with the funding from the World Bank (IDA) and the Government of Uganda. Component 2 of the project is focusing on physical planning, rehabilitation of rural roads and construction of economic infrastructure which include markets, fish landing sites, and slaughterhouses/ abattoirs in three Local Governments (Hoima District, Buliisa District and Buliisa Town Council).

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THE REPUBLIC OF UGANDA

Uganda Vision 2040

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
P.O. BOX 7096
KAMPALA, UGANDA

February 21, 2018

The Executive Director,
National Forestry Authority (NFA)

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
Consultations to Update Environmental and Social Management Plans for Rehabilitation of Gravel Roads and Construction of Local Economic Infrastructure in Buliisa and Hoima Districts

The Ministry of Lands, Housing and Urban Development (MLHUD) is implementing component 2 of the Albertine Regional Sustainable Development Project (ARSDP) with the funding from the World Bank (IDA) and the Government of Uganda. Component 2 of the project is focusing on physical planning, rehabilitation of rural roads and construction of economic infrastructure which include markets, fish landing sites, and slaughterhouses/ abattoirs in three Local Governments (Hoima District, Buliisa District and Buliisa Town Council).

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THE REPUBLIC OF UGANDA

Uganda Vision 2040

MINISTRY OF LANDS, HOUSING
AND URBAN DEVELOPMENT
P.O. BOX 7096
KAMPALA, UGANDA

February 21, 2018

MINISTRY OF GENDER, LABOR AND SOCIAL DEVELOPMENT
26 FEB 2018

The Permanent Secretary,
Ministry of Gender, Labour and Social Development

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
Consultations to Update Environmental and Social Management Plans for Rehabilitation of Gravel Roads and Construction of Local Economic Infrastructure in Buliisa and Hoima Districts

The Ministry of Lands, Housing and Urban Development (MLHUD) is implementing component 2 of the Albertine Regional Sustainable Development Project (ARSDP) with the funding from the World Bank (IDA) and the Government of Uganda. Component 2 of the project is focusing on physical planning, rehabilitation of rural roads and construction of economic infrastructure which include markets, fish landing sites, and slaughterhouses/ abattoirs in three Local Governments (Hoima District, Buliisa District and Buliisa Town Council).

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MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
P.O. BOX 7096
KAMPALA, UGANDA

February 21, 2018

The Executive Director,
National Water and Sewerage Corporation

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
Consultations to Update Environmental and Social Management Plans for Rehabilitation of Gravel Roads and Construction of Local Economic Infrastructure in Buliisa and Hoima Districts

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February 21, 2018

The Permanent Secretary,
Ministry of Tourism, Wildlife and Antiquities

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
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February 21, 2018

The Executive Director,
Uganda Wild Life Authority (UWA)

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
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February 21, 2018

The Executive Director,
Rural Electrification Agency (REA)

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The Executive Director,
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The Permanent Secretary,
Ministry of Water and Environment

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February 21, 2018

The General Manager,
Tullow Uganda

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The General Manager,
China National Offshore Oil Corporation (CNOOC)

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
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February 21, 2018

The Permanent Secretary,
Ministry of Energy and Mineral Development

ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP) COMPONENT 2
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APPENDIX 22: ENVIRONMENTAL DATA COLLECTION TOOLS

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool A: Timed Species Counts (TSC) for Avifauna

Date:……..District.....Road:.....……Location:…
….....GPS Coords.....
S/Time…….E/Time……Enumerators(i).....
(ii).....(iii).....(iv).....
.....(v).....(vi).....
(vii).....

S/No	Avian Species name (Local name or English name)	Avian Species name (scientific)	Est. distance from observer (m)	Activity of bird	Other Remarks

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MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool B: Transect Counts for Avifauna

Date:……..District.....Road:.....…….....Village:….....
….....GPS/S..... GPS/E.....
S/Time……E/Time……Enumerators(i).....
.....(ii).....

Hours	Species name	Scientific name	No.	Habitat type			Distance (m)	Activity			
				*FL	S	F		Fd	Sg	Fy	Pg
1st Hour											
Minute	Species name	Scientific name	No.	Habitat type			Distance (m)	Activity			
				*FL	S	F		Fd	Sg	Fy	Pg
2nd Hour											

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool F: Flora along the transect

Date:……District.....Road:..... …… Village .....

Transect No.....Plot No.....Plot GPS Coord.....

Enumerators(i).....(ii).....(iii)..... .....(iv)..... .....

(v).....(vi)..... .(vii).....

S/No	Flora Species name (Local name or English name) or description of Unknown Sample	Flora Species name (scientific)	dbh (cm)	Height (cm)	Est. Distance from the centre of the project road (m)	*Other Remarks

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd Joint/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool L1: Consultations on the Bio-Physical and Health and Safety Baseline conditions.

Date: …….....District.....*source of information ……

Names and phone contacts of Enumerators

(i).....(ii).....

(ii).....(iv)..... .....

S/N	Issues	Guiding questions	Specific location	remarks
1	Flora and Fauna	Are there any species that are threatened/of conservation concern?		
		Which species contribute to the livelihoods of community members?		
		Which species have been attached to spiritual and/or cultural values?		
	Water resources	Which streams are likely to be affected by the project activities?		
		How will the water resources be affected?		
		Measures that can be put in place to mitigate pollution of water resources?		
	Drainage	What measures can be put in place to minimise erosion and flooding in the area/ along the roads?		
	Noise	Noise receptors in the area		
		How can noise nuisance be mitigated during project activities?		

	Dust/Air pollution	Which measures can be put in place to mitigate air pollution during project activities?		
	Waste management	Type of waste to be produced		
		How can waste be safely disposed of?		

***NFA,UWA, District Natural Resource Officer, District Environmental Officer, CDO and any others specify.**

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd Joint/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool L2: Consultations on the Bio-Physical and Health and Safety Baseline conditions.

Date: …….....District.....*source of information ……

Names and phone contacts of Enumerators

(i).....(ii).....

(ii).....(iv)..... .....

S/N	Issues	Guiding questions	Specific location	remarks
1	Archaeological and cultural resources	Are there any Archaeological and cultural resources?		
		Give the name, location and proximity from the road		
	Social amenities/Utilities	Which social amenities are likely to be affected by project activities and how?		

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

Albertine Region Sustainable Development Project

MLHUD/MBW Consulting Services Ltd Joint/DLG Joint Update of Bio-Physical and Health and Safety Baseline conditions in Project Briefs for Batch 1 Sub-Projects in Buliisa and Hoima Districts

Tool L3: Consultations on the Bio-Physical and Health and Safety Baseline conditions.

Date: …….....District.....*source of information ……

Names and phone contacts of Enumerators

(i).....(ii).....

(ii).....(iv).....

S/N	Issues	Guiding questions	Specific location	Remarks
1	**Health and safety**	Measures to ensure health and safety of workers?		
		Measures to ensure health and safety of workers?		

***Labour officer, District Health Officer, Police Officer**

APPENDIX 23: SOCIO-ECONOMIC DATA COLLECTION TOOLS

Household socio-economic questionnaire (2017)

Introduction to the Questionnaire ***(refer to the separate paper provided)***

Instructions

1. Circle the Code 2. Transfer the Code into the Table 3. Circle the code and fill the answer into the next cell or row 4. Write the answer into the blank space provided. Make sure the answer is fully understandable to the Principal Researcher 5. Follow skip instructions 6.ProvideMultiple responses where applicable

- Do not ask any question before you introduce the study *(Refer to the introduction)*

Your Bio Data and Instructions

• Enumerator Name & Tel	
• Date of interview	
• Start Time _____	• End Time_____

Identification Particulars ***(Use the valuation Data)***

• District	
• Sub-county	
• Parish	
• Village	
• Name of Respondent	
• Name of Household Head	
• Telephone Number of Household Head	
• Household affected ***(circle one)***	1. Yes 2. No

SECTION ONE: RESPONDENT & HOUSEHOLD CHARACTERISTICS

Q. No.	Question	Code
1.01	Gender of household head (Observe and record)? 1. Male 2. Female	
1.02	What is the age of household head? (in completed years) _____	
1.03	What is tribe of household head? _____	
1.04	What is religion of household head? 1. Catholic 2. Protestant 3. Moslem 4.Born Again 5. Adventist 6.Orthodox 7. Other (specify)_____	
1.05	What is marital status of household head? • Married/cohabiting (monogamy) • Married/cohabiting (more than one wife), Number _____ • Single • Separated/ Divorced • Widowed	
1.06	What is your level of education? • None 2. Functional adult literacy 3. Primary school incomplete • Primary school completed 5. Ordinary level education • Advance level education 6. Diploma Level • University degree 8. Post-graduate Degree	
1.07	Have you always lived in this village/Location? 1. Yes 2. No	
1.07a)	If No, how long have you lived in this village/Location 1= 0-10 years 2=10-20years 3= Over 20 years	
1.08	How many adults (people aged 18 years and above) normally live and eat their meals together in this dwelling? [_____] #1-10 99 [_]Don't know	
1.09	How many of them are women? [_____] #0-20 [_] 99 [_]Don't know	
1.10	Are there children under the age of 5years in the household? 1 [_] Yes 2 [_] No if no go to Q1.11)	
1.10a)	If Yes, how many children under the age of 5 years live in the household?	
1.11	Are there elderly persons (65 years and above) in this household? 1 [_] Yes 2 [_] No 98 [_] refusal 99 [_] Don't know If No go to Q1.15	

1.11	If Yes, how many elderly persons (65 years and above) are in this household? [_____] #0-20 99. Don't know	
1.12	Do you have any member of the household who temporally leaves home and returns? Yes 2. No *(Skip to Q.1.13)*	
1.12a)	If yes, why does that person temporarily leave this home? ***(Can be multiple response)*** Studying 2. Fishing 3. Migrant worker but not fishing 4. Treatment 5.Employment obligations 6. Other (specify)_____	
	Housing Characteristics	
1.13	What is the ownership of the household residence Owned Rented	
1.13a)	If rented, how much rent are you paying currently UGX……	
1.14	What is the type of the main house? 1= Independent house 2= Apartment in building 3= Tenement (Muzigo) 4= Hut 9= Other (specify)……	
1.15	What is the predominant material of the roof? 1= Iron sheets 2= Grass thatched 3=Tiles 4= Wood 9=Other material (specify)……	
1.16	What is the predominant material of the outer walls? 1= Brick or cement block 2= Stone with cement 3= Stone with mud 4= Adobe (sun-dried brick/unburnt bricks) 5= Quincha (mud and wattle) 6= Wood 9= Other material (specify)……	
1.17	What is the predominant material of the floor? 1= Cement screed 2= Earth, sand or cow dung 3= Tiles 4= Bare wood planks 5= Parquet, polished wood 6= Vinyl or asphalt strips 9= Other material (specify)……	
1.18	Where did you obtain information about the project? **[Multiple responses allowed]** 1= Sensitization team 2= Friend 3= Village leaders (Local Council chairperson) 9= Other (Specify)……	
1.19	What are your expected **negative** effects of the power line? **[Multiple responses allowed]** 1= Loss of land and/or crops 2= Damage to local road during construction 3= Loss of buildings 4= Severance of social ties hence ,social disruption 5= Inadequate compensation 6= None 9= Other (Specify)……	
1.20	What are your expected **positive** effects of the power line? **[Multiple responses allowed]**	

	1= Improved infrastructure and access due to power line construction 2= Full and fair compensation 2= Increased access to power nationally 3= None 9= Other specify……	
1.21	How did you acquire this land? 1= Bought 2= Renting 3= Inherited 4= Given as a gift 5= Just settled 6= Other (Specify) ……..	
1.22	In which year did you acquire this land?.....	
1.23	How do you hold this land? 1= In possession of title 2= Inherited but no title 3= Tenant on titled land 4= On public land 5= Customary 6= Individual free hold tenure 7= Collective free hold tenure 8= Short leasehold 9= Long leasehold	
1.24	Are there any encumbrances on this land? 1= Yes, claim by family members 2= Yes, mortgage/loan 3= No, all documents available 4= No, and no documentation available	

SECTION TWO: VULNERABILITY OF HOUSEHOLD MEMBERS

Q. No.	Question	Code
2.01	Do you have orphaned children in this household? 1. Yes 2. No *(Skip to Q.2.03)*	
2.01a)	If yes, how many? _____	
2.02	How are they related to Head of household? 1= Head of household 2= Spouse 3= Son 4= Daughter 5= Grandchild 6= Nephew 7= Niece 8= Not related 9= Other (specify ……..	
2.03	Does your household have any **other** vulnerable people? 1. Yes 2. No *(Skip to Q.3.01)*	
2.04	What kind of vulnerability do these people have? (Can be multiple response) 1= Very old (Aged 65+) 2= Disabled 3= Chronically ill 4= Widowed 5= Displaced 6= Female-headed 7= Child-headed 9= Others (Specify)……	

SECTION THREE: HOUSEHOLD LIVELIHOOD RESOURCES

Q. No.	Question	Code
3.01	Do you have any household member having access to regular source of income? 1. Yes 2. No *(Skip to Q 3.02)*	
3.01a)	If yes, how many household members having access to regular sources of income? _____	
3.02	For those household members who are participating in economic activities, what are their various sources of income?	

	a) What are your sources of income? *(Multiple responses allowed)*	b) Who participates in such activities? *Myself* *Spouse* *Children* *Dependant* *Worker* *Not Applicable*	c) Income in UGX?	d) Frequency *Daily* *2. Weekly* *Monthly* *Bi-annual* *Annual*
	Crop farming (subsistence)			
	Crop farming commercial			
	Livestock farming Subsistence (<20 cattle)			
	Livestock farming commercial (>20 cattle)			
	Fishing activities/Fish farming			
	Small business enterprise/trade			
	Manufacturing/processing			
	Wage-based activities/causal laboring			
	Personal Services			
	Salary employment			
	Rental, interest, dividend income land/property income)			
	Public transfer/pension			
	Private remittance/transfer			
	Charity/alms			
	Others (specify			

3.03 What household basic necessities do you spend on? ***(Do not read out, Expenditure amount should be less or equal to income)***

Household Expenditure	Frequency of expenditure *Daily* *Weekly* *Monthly* *Quarterly*	Amount spent
Food		
School fees		
Scholastic material		
Health		
Telephone (airtime)		
Water		
Energy (paraffin, wood)		
Toiletry (soap etc.)		
House rent		
Premise rent		
Electricity		
Transport		
Alcohol		
Rent		

	Garbage disposal				
	Other (specify)				

3.04 Among the household members, whose primary responsibility is it to: ***(Tick)***

Activities ***(Read out all)***	Woman	b) Man	Joint decision	e) Boy Child	f) Girl Child	g) All Household Members
Do domestic activities (water, fuel, food,)						
Take care of children daily						
Farming						
Livestock rearing						
Working for outside income						
Attending village meetings						
Owning land						
Owning livestock						
Owning durable household assets						
Marketing produce						
Using financial resources						
Buying basic necessities						
Buying durable household assets (including land)						

Q. No.	Question	Code

3.05 ***Do you have at least one of the following items in this household (***read out***)? 1. Yes 2. No***

Information and communication		**b)Quality of life Assets**		**c)Productive Assets**	
1. Radio		6. Car		14. Kiosk/shop	
2. TV		7. Motorcycle		15. Commercial water tap	
3. Mobile Telephone		8. Bicycle		16. Plot of land	
4. Fixed telephone		9. Fridge		17. Rental house	
5. Clock/watch		10. Electricity supply		18. Commercial building	
		11. Reliable water supply		19.Cattle	
		12. Own descent House		20. Goats/Ships	
		13. Sofa seats		21. Poultry	

3.06 Do you have electricity in this area? 1. Yes 2. No

3.07 What type of energy is used for the following activities in your household? ***(Tick as applicable)***

	Activity	Grid Electricity	Kerosene	Car Battery	Dry cell	LPG	Firewood	Charcoal	Engine	Gen-set	Solar system	Manual	Not Applicable
a)	Lighting												
b)	Cooking												
c)	Grinding/ milling												
d)	Radio												
e)	TV												
f)	Cell phone												
g)	Equipment												
h)	Machinery												

3.08 ***What major problems do you experience in your area?***

a) Major problems (circle the code)	b) Specify/What causes the problems
Income related problem?	
Production related problem	
Marketing problem	
Illiteracy and Ignorance	
Access to quality education	
Disease	
Access to quality healthcare	
Transport problems	
Social problems	
Remoteness and isolation	
Environmental problems	
Land wrangles	
Others (Specify)	

SECTION FOUR: FARM PRODUCTION AND FOOD SECURITY

4.01	What is the total land that is owned by this household? 1=Less than one acre 2=Between 1 and 2 acres 3=Between 2 and 5 acres 4=Between 5 and 10 acres 6=Ten and more acres
4.02	What is the major land tenure system for your household land?

	1=Customary 2= Free hold tenure 3= Leasehold 4= Mailo 5= Kibanja 9= Other *(specify)……*	
4.03	Under what use/ purpose have you put your household land? 1= Crop growing 2= Livestock keeping 3= Forestry 4= Fish farming 5= Residential purpose 6= Other commercial purpose (e.g. built rental buildings, rented out) 7= Not in use/fallow	
4.04	What is the major source of food for this household? 1= Buy from the market 2= Grown on this parcel 3= Grown elsewhere 9= Other *(specify)……*	
4.05	Where do you usually sell your produce? 1= Don't sell at all 2= Local market 3= Outside market (far from home) 4= Outside the district 5= Co-operatives 9= Other *(specify)* ……	
4.06	What problems have you experienced in your production activities? ***(Multiple response - Probe for: water, soils, land size, capital, attitude etc.)*** 1= Drought/water 2= Lack of sufficient land 3= Lack of tools, like hoes 4= Lack of markets 5= Lack of good access to markets 6= Poor post-harvest handling 7= Poor technology 8= Lack of credit 9= Other *(specify)* ……..	
4.07	Does this HH keep any animals or birds? 1= Yes 2= No *(Skip to Q.4.08)*	
4.07 a)	If yes, which animals? 1= Birds Poultry 2= Piggery 3= Goats 4= Cows 9= Other *(specify)*……..	
4.07 b)	If Yes, where do you graze the livestock? 1= Private own land 2= Private borrowed land 3= Customary land 4= Public land 5= Hired 9= Other *(specify)* ……	
4.07 c)	What problems have you experienced in livestock rearing? ***(Probe for: water, soils, land size, capital, attitude etc.)*** 1= Inadequate/Lack of water 2= Inadequate/Lack of pasture land 3= Animal disease 4= Cattle theft 5= Expensive drugs 6= No help from government 9= Other *(specify)* ……	

4.08	Do you experience severe dry condition in this area? Yes every year 2. Yes in some years 3. I do not know 4. No (skip Qn 3.1)
4.08a)	If Yes, in which months of the year does the drought occurs? Tick the number

1	2	3	4	5	6	7	8	9	10	11	12
Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Domestic Food Production

4.09	Do you have access to land? *Whether personal or borrowed* *Yes 2. No* ***(skip to 4.10)***
4.09a)	If yes, how many are under cultivation? _____

a) How many acres owned?	b) Of those, how many are under cultivation?

4.10	Do you participate in agriculture? 1. Yes 2. No (Skip to)
4.11	What agricultural activities are done on that land? 1. Crop farming 2. Animal rearing 3. Poultry 4. Bee keeping 4.Earth work 5. Fishing 6. Forestry 7. Extraction (quarry) 8. Under fallow 9.Other
4.11a)	If crop farming, tell me, what types of crops are grown? (***Fill in table below)***

a)Crops	b) acres	c) How many seasons	c) Yield per season (sack)	d) Amount Consumed *sacks)*	e) Amount sold *(sacks)*	f) Amount available (*sacks*)

	Banana							
	Sweet potato							
	Cassava							
	Maize							
	Rice							
	Sorghum							
	Maize							
	Millet							
	Simsim							
	Sunflower							
	Ground nuts							
	Peas							
	Beans							
	Fruits *(specify)*							
	Vegetables *(specify)*							
	Others *(specify)*							

4.12 If this household rears animals/poultry ***(Q.4.07above)?***

a) What are they?	b) Number you currently have	c) Have you sold any in the past 12 months? (Confirm with 2.2) 1. Yes 2. No	d) If yes, how many did you sell in the past 12 months?
Cattle			
Goats			
Sheep			
Pigs			
Donkey/camel			
Poultry			
Other			

4.13 **Food Loss**
Do you have any storage facility for keeping excess supply?
1. Yes, Observe it 2. No (Skip to ….), If No
Why_____

4.14 Do you experience problems of crop loss due to vermin? 1. Yes 2. No ***(Skip to 4.16)***

4.15 What is the degree of crop destruction?
1. Severe 2. Moderate 3. Negligible

4.16 Do you add value to farm/livestock produce?
1. Yes 2. No ***(Skip to4.17)***

4.16a) If Yes, what value addition? 1. Sun drying 2. Salting 3. Processing 4. Processing

	Farming methods
4.17	Do you use any farm tools? 1. Yes 2. No ***(skip to Q 4.18)***
4.17a)	If Yes, what type of farm tools do you use? 1, Ox plough 2.Hand hoe 3. Tractor 4. Other
4.18	Do you practice any improved farming methods 1. Yes 2. No ***(Skip to4.20)***
4.18a)	If yes, which ones, What other improved farming methods do you normally use? 1. Mulching 2. Irrigation 3. Fertilisation 4. Crop farming 5. Crop rotation 6. Fallowing 6. Grafting 7. Pesticide use 8. Other
4.19	Have you or member of the household ever benefited from extension services within the last 6 months 1. Yes 2. No (Skip to)
4.19a)	If yes, what knowledge did you gain?
	Availability of Food at Market Outlets
4.20	Do you suffer from periodic food shortage in this house? 1. Yes 2. No ***(Skip to 4.21)***
4.20a)	If yes, how often do you buy food? All the time 2. Occasionally 3. Rarely 4. Not at all
4.21	In times of food shortage, do you seek outside food assistance? 1. Yes 2. No (Skip to)
4.21a)	If yes, where do you seek food assistance from? ***(Code all that apply)*** 1. Neighbour/Friends 2. Local markets 3. Shops 4. International Agency 3. Government 4. Other (specify)
4.21b)	From those International agencies:

	1. Yes 2. No	If no, why?
Can you access food from that community outlet at all times when you need it?		
Can you access any amount of food when you need it?		
Can you find reasonable price food for any food when you need it?		
Can you can find the quality of food you need?		

4.22	How often do you buy food? 1. Buy food always 2. Buy food occasionally 3. Buy food but rarely 4. Do not buy food ***(Skip to Q.)***
4.22a)	If you buy food, from which outlet? 1. Neighbour 2. Local market 3. Shop 4. Vendors
4.22c)	What is the distance to the market outlet? _____
	Access To Business Opportunity

4.23 Do you have any business or commercial enterprise from which you earn income? *(answer must be consistent with Household income question)*
1. Yes 2. No *(Skip to Q 3.14)*

4.23a) If yes, which one?

Type of Business (specify)	**a**)Ownership 1. Sole proprietor 2. Family owned 3. Partnership 4. Corporation	b) No. of employees (Size of Business)	c)Where is that enterprise located 1. Trading centre 2. Rural	d) Do you pay tax for that business 1. Yes 2. No
Retail shop				
Mobile trade				
Space/accommodation				
Social Service (Sch HF)				
Small business & Service (specify)*				
Value addition (crops & livestock)				
Small manufacturing				
Construction				
Professional services				
Transport services				
Microcredit				
Mining/quarry				
Other				

***Example of Small Business and Service:** hairdressing, carpentry, electrician, restaurant, internet, preaching. **Professional services:** Accountant, Lawyer, Internet, Veterinary

4.24 Do you experience any problem in managing that business? 1. Yes 2. No *(Skip to Q 4.25)*

4.24a) **If yes, which one? (code using number)**

Human Resource	**Demand and Supply**	**Structural/Physical**	**Infrastructure & Facilities**
1.Managerial skills	6.Poor access to market	12.License & policies	18.Poor road condition
2.Technical skills	7.Scarcity of input (RM/E)	13.Tax burden	19.High transport costs
3.Financial literacy (bk)	8.Shortage of commodity	14.Cost of rent	20.Transport services
4.Staff shortage	9.Low profit margin	15.Bad debts	21.Working space/premise
5.Lack of business plan	10. Access to credit	16.Safety of the products	22.Storage/perishable
		17.Un-favourable	23.Power supply
			11.Risk/accidents

4.25 Do you have financial services in this area?
Yes 2. No

4.25a) If yes, which one ?

	What financial institution is available	How many Km	
	1. Bank		
	2. SACCO		
	3. MFI		
	4. Other (specify)		

4.26	Does your business own an account with any financial institution? Yes 2. No
4.27	Have you had access and utilised (micro) credit opportunities in this community in the last 12 months? Yes 2. No *(Skip to Q **4.28**)*
4.27a)	What is/was the source of such micro-finance services 1. Bank 2. MFI 3. CBO/NGO 4. VSLA 4. SACCO 5. Government 6_
4.27c)	If yes to Q.4.27 above, what services do you obtain from such MFI *(multiple responses)* 1. Credit 2. Saving 3. Insurance 4. Financial training 5. Business Advice/Entrepreneurship6.Other
4.28	***(Regardless whether a person has business)*** Have you ever benefited from formal training in entrepreneurial skills 1. Yes 2. No
4.28a)	***If Yes,*** what skills did you gain?

Insert code here	b) What type of Skills	b) How would you rate the level of knowl or skills 1. High 2. Average 3. Low
Managerial skills		
Technical skills		
Financial literacy (bk)		

SECTION FIVE: ACCESS TO HEALTHH SERVICES

5.01	What are the most common health problems in this community High prevalence or incidence of diseases Availability of water sources Lack of maternal and child health Long distance to the health facility Cost of health services Quality of healthcare services Shortage of medicine
5.02	Do you have any member of household who suffered from any health problem in the past six months? 1. Yes 2. No
5.02a)	If yes, which one?

Water-borne illnesses	**for who has suffered from the illne**
Typhoid	
Diarrhoea	
Brucellosis	
Malaria	
Airborne	
Cough	
Measles	

	Pneumonia	
	Acute Respiratory infection	
	Chronic illnesses	
	HIV/AIDS	
	Diabetes	
	High Blood pressure	
	Nutrition	
	Kwashiorkor	
	Marasmus	
	Anaemia	

Codes: 1. Adult male 2. Adult female 3. Youth (12-18yrs) 4. Child (6-12yrs) 5. Child under 5 yrs.

5.02b)	Did you seek health services? 1. Yes 2. No	
5.02c)	If No, What prevented you? ***(multiple codes apply)***	

Distance to the facility	Resorted to traditional medicir
Bad road condition	Discouraged by the quality of
High transport costs	Facility lacks qualified/caring h
Financial constraints	Drugs are always out of stock
Busy farming	Delayed decision-making
	Other (Specify)

5.03	Is there a mother in this household? 1. Yes 2. No	
5.03a)	(***If more than one mother in the household consider one with the youngest child*** How old is her last born?***)*** _____	
5.03b)	Did you seek the following services from a professional health provider? 1. Yes 2. No**(Skip to Q** 5.03c**)**	
5.03c)	**If Yes,**	

a) Type of Services?	b) Response Yes No	c) How many times
1. Antenatal		
2. Child Birth		
3. Neonatal		
4. Postnatal		

5.03c)	If the child birth was not attended by a professional health worker who else attended to you? 1. Traditional Birth Attendants 2. Relative 3. Self-Management	
5.04	Do you know any childhood immunizable diseases? 1. Yes 2. Do not know (Skip to Q 5.05)	
5.04a)	***If Yes***, mention the childhood immunisable disease? 1. Polio 2. Tuberculosis 3. Diphtheria 4. Measles 5. Tetanus 6. Whooping Cough 7. Hepatitis B (liver disease) 8. Haemophilus Influenza	
5.05	Have you sought any immunisation for your child? 1. Yes 2. No, why_____	
5.06	Do you have long lasting impregnated mosquito net in this house? 1. Yes 2. No *(Skip to Q 5.10)*	
5.07	Number of household members and Mosquito nets Total number of household members | Number of mosquito nets in	
	SECTION SIX: AVAILABILITY AND ACCESS TO HIV and AIDS SERVICES	
6.01	Are there any HIV and AIDS services available to the people in this community? 1. Yes 2. No 3. Don't know	
6.01a)	If Yes, what HIV and AIDS services are available to the community?	
6.02	What challenges do people face in accessing these services?	
	SECTION SEVEN: ACCESS TO WATER AND SANITATION AND INFORMATION	
7.01	What are the sources of water available to your household? (Multiple sources)	

a) Source of water (Multiple response Allowed)	b) Priority rating 1.Primary source 2. Secondary source	c) How do (Smell, tast below)
1. Lake		
2. Valley dam		
2. Protected spring/well		
3. Unprotected spring/well		
4. Private Hand dug well		
5. Public Hand dug well		
6. Rain water harvesting		
7. Gravity feed		
8.River, lake, stream, swamp		
9. Household connection		
10. Public stand post		

	11. Public hand pump/boreholes			
	12.Privately owned boreholes/yard taps			
	13. Vendor			
	14. Others, specify:			

Code for the Quality of water1. Very Good 2. Good 3. Fair 4. Poor 5. Very Poor

7.02	Who collects water in this household? Woman 2. Man 3. Girl child 4. Boy Child 5. All family members 6. Vendor
7.03	What problems are associated with the priority water source? (Multiple Response Allowed, do not read out but probe) Low yield (flow) 2. Water dries up during dry season 3. Long distance to the water source Delay due to large crowd and long queue at the water source Fighting for water and vendors dictation of the order of collection 6. Poor quality of water
7.04	Have you or member of the household ever attended a health related education?? 1. Yes 2. Do not know (Skip to Q)
7.04a)	If yes, who organised that seminar? 1. CBO 2. NO 3. Health facility 4. Community Health Worker 5. Local .Leader
	What topics were covered? 1_._____ 2.
	SECTION EIGHT: LEVEL OF ACCESS TO EDUCATION
8.01	Do you have a school going child in this community 1. Yes 2. No
8.02	Do you have any household member who is attending school? [_] All attend school [_] Majority attend school [_] Minority attend school [_] All not attend school (***Skip to Q 9.01)*** [_] No Applicable (***Skip to Q 9.01)***
8.02a)	***If yes, indicate the class that they are attending:***

Level	How many children are attending that school level	Distance (Km) from home	Ownership 1. Public 2. Private

	Pre-primary school				
	Primary school				
	O Level				
	A Level				
	University				
	College				
8.02b)	If not very satisfied, what problems affect the quality of education at school attended by your child?				
	Student/parent relationship	**School related problems**	**Accessib**		
	High cost of tuition	Classroom overcrowding	Dangerou condition		
	Expensive scholastic material	Scholastic material	Distant sc		
	Irregular attendance	Few teachers			
	School drop out	Questionable qualified teachers			
	Child stubborn	De-motivated teachers			
	SECTION NINE: TRANSPORT PROBLEMS				
9.01	Do you experience any transport problem in this area? 1. Yes 2. No (***Skip to Q.902)***				
9.01a)	If yes, what transport problems do you experience? Impassable road throughout the year Impassable road during heavy rains Lack of connecting roads Narrow roads Low traffic volume High travel cost High travel cost Long distances Overloading Accidents 19. Others (Specify)……				
9.01b)	Do you think those transport bottlenecks have affected local development 1. Yes 2. No				
9.01c)	If yes, in which ways …… …… …… …… ……				
9.02	Do you think rehabilitation of the road will contribute to improved quality of life? 1. Yes 2. No				
9.02a)	If yes, how will the better road condition improve?				
	Household Income:				
	Access to market:				
	Access to health services:				
	Access to education:				

THANK YOU FOR YOUR TIME AND RESPONSE

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT
IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

FDG GUIDE FOR LC REPRESENTATIVES

(Note to the Interviewer: Remember to locate Date and time of interview, Name, Title, Years in Organization, Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this exercise of data collection.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under Albertine Region Sustainable Development (ARSDP). The Studies are done to get your views about the project and to fulfill Ugandan Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A: HIV AND AIDS

1. What is your comment on HIV and AIDS trends in this area?- how is the situation, which categories are most affected? How are they affected? Which parts of this area are most affected? How has HIV affected poverty? Has HIV increased or reduced or stagnanated?
2. What explains the trends above?
3. Who are the most affected and why? (probe for categories like truck drivers, youths, bar operators, widows, orphans, fishing communities, etc)
4. What HIV and AIDS response mechanisms are in place? (Probe for different Prevention, Support, Care and Treatment services and service providers) Probe for any capacity building gaps that can be improved.
5. How will the roads construction affect the trends of HIV and AIDS?

6. What should be done during and after construction to minimize the effects of HIV and AIDS? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B: CHILDREN RIGHTS

1. Comment on child rights trends in this area
2. What are the major Child rights abuses in this community? (Probe for Child Labor, Defilement, Child Sacrifice, Rape, emotional abuse, neglect, and physical abuse like battering)
3. What are the triggers of the child rights abuses? Who are the perpetuators?
4. What are the existing Protection Mechanisms in Place in this community? (Probe for formal and informal Institutions, Laws, Bylaws, Ordinances, networks etc)
5. Where are the child rights abuses cases reported? Who reports the cases?
6. How will the roads project affect child rights during, and after construction?
7. What should be done to prevent child rights abuses during and after construction? Who will do this? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C: DISABILITY

1. What is the perception of the community to PWDs?
2. What are the major forms of disabilities in this community?
3. What are the existing systems to improve the life of PWDs in this community?
4. How will the proposed roads project affect the life of PWDs during and after construction?
8. What can be done to mitigate the negative effects of the road to PWDs during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION D: GENDER RELATIONS

1. What is your comment on Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
2. Why is the trend like that?
3. Who are the perpetuators?
4. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
5. How will the road project affect the Gender relations?
6. What Gender concerns should be put in consideration to minimize gender related problems during and after construction?

SECTION E: HEALTH

Existing health units, Access (Distance and Access), Mode of transport, child and maternal health, major diseases, mortality and morbidity

SECTIION F: EDUCATION INDICATORS CHECKIST

Enrolment Levels, Drop out issues, Performance, Attitude of education to boy and girl child, Disability in education, **Child protection in Schools**

SECTION G: SECURITY AND PEACE BUILDING

1. What have been the security trends in the last 5 years? Has there been any armed conflict?
2. Who ensures that there is peace in the community? Probe for formal and informal instutions, and leaders
3. What is the crime rate like in the community?
4. How will the project influence crime rate?
5. What should be done to mitigate crime rate during and after construction? Probe on how the reporting of such crime or complaints should be done.

SECTION H: EMPLOYMENT AND LABOUR

1. Comment on the unemployment/ employment trends in the last 5 years in this community?
2. What are the trends on labor force supply (Probe for skills, composition of Females and Males, job categories)
3. For those who are employed, what are the most common Labour rights issues in the community?
4. What are the available safety nets to protect workers in this community? Probe for institutions, networks, coalitions, unions, etc) Probe for any capacity building gaps that can be improved.
5. What labour concerns will the road projects have during and after construction?
6. What can be done to minimize the negative impacts on labour and employment during and after construction?

SECTION I: CULTURE AND ETHNICITY

1. What are the existing cultural groups in the area?
2. Have there been trends of cultural conflicts? Have there been religious conflicts? Probe for dominant religious and cultural grouping.
3. What cultural values affect peace building? (Probe for the hindering and promoting values?
4. What should be the cultural concerns to put into considerations during and after the rods construction?
5. What are the roles of the Cultural and Religious leaders?

SECTION J: SOCIAL AMENITIES

1. What are the existing social amenities (electricity, water, health centers, hospitals, green spaces, beaches, schools, etc)
2. How will the road projects affect the existing social amenities?
3. What can be done minimize the effect on these amenities?

SECTION K: COMMUNITY ACCESS TO INFORMATION

1. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
2. How will the roads project affect the existing channels of information?
3. How should information be delivered to the community during and after the roads construction?

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)
IN CONJUCTION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

FGD GUIDE FOR CHILDREN

(Note to the Interviewer: Remember to locate Date and time of interview, Name and Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this exercise of data collection.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final processes of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under Albertine Region Sustainable Development (ARSDP). The Studies are done to get your views about the project and to fulfill Ugandan Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

SECTION A : CHILDREN RIGHTS (CSO, LCS, SMC, SEC FOR CHILDREN, UGANDA POLICE, CDOS)

7. Comment on child rights trends in this area
8. What are the major Child rights abuses in this community? (Probe for Child Labor, Defilement, Child Sacrifice, Rape, emotional abuse, neglect, and physical abuse like battering)
9. What are the triggers of the child rights abuses? Who are the perpetuators?
10. What are the existing Protection Mechanisms in Place in this community? (Probe for formal and informal Institutions, Laws, Bylaws, Ordinances, networks etc)
11. Where are the child rights abuses cases reported? Who reports the cases?
12. How will the roads project affect child rights during, and after construction?
9. What should be done to prevent child rights abuses during and after construction? Who will do this? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT
UPDATE OF PROJECT BRIEFS, RESETTLEMENT ACTION PLAN (RAP) STUDIES AND ENGINEERING DESIGN REPORTS IN CONJUCTION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

FDG GUIDE FOR PHA GROUPS

(Note to the Interviewer: Remember to locate Date and time of interview, Name and Gender of interviewee, Place of the Interview in the recording sheet)

Greetings,

My name is _____ taking part in this exercise of data collection.

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I therefore request you to give me part of your time to respond on the following themes.

SECTION A: HIV AND AIDS

10. What is your comment on HIV and AIDS trends in this area?- how is the situation, which categories are most affected? How are they affected? Which parts of this area are most affected? How has HIV affected poverty? Has HIV increased or reduced or stagnanated?
11. What explains the trends above?
12. Who are the most affected and why? (probe for categories like truck drivers, youths, bar operators, widows, orphans, fishing communities, etc)
13. What HIV and AIDS response mechanisms are in place? (Probe for different Prevention, Support, Care and Treatment services and service providers) Probe for any capacity building gaps that can be improved.
14. How will the roads construction affect the trends of HIV and AIDS?
15. What should be done during and after construction to minimize the effects of HIV and AIDS? (Probe on who can do it)

SECTION B : DISABILITY

5. What is the perception of the community to PWDs?
6. What are the major forms of disabilities in this community?
7. What are the existing systems to improve the life of PWDs in this community?
8. How will the proposed roads project affect the life of PWDs during and after construction?
9. What can be done to mitigate the negative effects of the road to PWDs during and after construction?

SECTION C: COMMUNITY ACCESS TO INFORMATION

4. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
5. How will the roads project affect the existing channels of information?
6. How should information be delivered to the community during and after the roads construction?

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT

IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

FOCUS GROUP DISCUSSION GUIDE FOR SCHOOL MANAGEMENT COMMITTEES

(Note to the Interviewer: Remember to locate Date and time of interview, Name and Gender of interviewee, Place of the Interview in the recording sheet)

Greetings,

My name is _____ taking part in this exercise of data collection.

The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final processes of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under Albertine Region Sustainable Development (ARSDP). The Studies are done to get your views about the project and to fulfill Ugandan Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be confidential and is intended to complete the Project preparations as required.

I therefore request you to give me part of your time to respond on the following themes.

SECTION A: GENDER RELATIONS

7. What is your comment on Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
8. Why is the trend like that?
9. Who are the perpetuators?
10. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
11. How will the road project affect the Gender relations?
12. What Gender concerns should be put in consideration to minimize gender related problems during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

B: CHILDREN RIGHTS (CSO, LCS, SMC, SEC FOR CHILDREN, UGANDA POLICE, CDOS)

13. Comment on child rights trends in this area
14. What are the major Child rights abuses in this community? (Probe for Child Labor, Defilement, Child Sacrifice, Rape, emotional abuse, neglect, and physical abuse like battering)
15. What are the triggers of the child rights abuses? Who are the perpetuators?
16. What are the existing Protection Mechanisms in Place in this community? (Probe for formal and informal Institutions, Laws, Bylaws, Ordinances, networks etc)
17. Where are the child rights abuses cases reported? Who reports the cases?
18. How will the roads project affect child rights during, and after construction?
19. What should be done to prevent child rights abuses during and after construction? Who will do this? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C : COMMUNITY ACCESS TO INFORMATION

7. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
8. How will the roads project affect the existing channels of information?
9. How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

Thanks for your Time and Cooperation.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

KEY INFORMANT INTERVIEW GUIDE FOR BUNYORO KINGDOM, FAITH BASED ORGANISATIONS AND OTHER TRADITIONAL LEADERS

(Note to the Interviewer: Remember to locate Date and time of interview, Name, Title, Years in Organization, Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this data collection exercise.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under the Albertine Region Sustainable Development Project (ARSDP). The Studies are done to get stakeholders' views about the project and to fulfill Uganda's Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be treated confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A : HIV AND AIDS

16. What is your comment on HIV and AIDS trends in this area?- how is the situation, which categories are most affected? How are they affected? Which parts of this area are most affected? How has HIV affected poverty? Has HIV increased or reduced or stagnated?
17. What explains the trends above?
18. Who are the most affected and why? (probe for categories like truck drivers, youths, bar operators, widows, orphans, fishing communities, etc)
19. What HIV and AIDS response mechanisms are in place? (Probe for different Prevention, Support, Care and Treatment services and service providers) Probe for any capacity building gaps that can be improved.
20. How will the roads construction affect the trends of HIV and AIDS?

21. What should be done during and after construction to minimize the effects of HIV and AIDS? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B: GENDER RELATIONS

13. What is your comment on Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
14. Why is the trend like that?
15. Who are the perpetuators?
16. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
17. How will the road project affect the Gender relations?
22. What Gender concerns should be put in consideration to minimize gender related problems during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C : CULTURE AND ETHNICITY

6. What are the existing cultural groups in the area?
7. Have there been trends of cultural conflicts? Have there been religious conflicts? Probe for dominant religious and cultural grouping.
8. What cultural values affect peace building? (Probe for the hindering and promoting values?
9. What should be the cultural concerns to put into considerations during and after the rods construction?
10. What are the roles of the Cultural and Religious leaders?

SECTION D: SOCIAL AMENITIES

4. What are the existing social amenities (electricity, water, health centers, hospitals, green spaces, beaches, schools, etc)
5. How will the road projects affect the existing social amenities?
23. What can be done minimize the effect on these amenities? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION E : COMMUNITY ACCESS TO INFORMATION

10. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
11. How will the roads project affect the existing channels of information?
24. How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

Thanks for your time and Cooperation.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)

IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

KEY INFORMANT INTERVIEW GUIDE FOR DCDOS, CDOs, and CSOs

(Note to the Interviewer: Remember to locate Date and time of interview, Name, Title, Years in Organization, Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this data collection exercise.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under the Albertine Region Sustainable Development Project (ARSDP). The Studies are done to get stakeholders' views about the project and to fulfill Uganda's Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be treated confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A: HIV AND AIDS

25. What are your comments on HIV and AIDS trends in this area?- (Probe on. how is the situation, which categories are most affected? How are they affected? Which parts of this area are most affected? How has HIV affected poverty? Has HIV increased or reduced or stagnanated?)
26. What is your view on the factors that explain the trends above?
27. Who are the most affected and why? (probe for categories like truck drivers, youths, bar operators, widows, orphans, fishing communities, etc)
28. What HIV and AIDS response mechanisms are in place? (Probe for different Prevention, Support, Care and Treatment services and service providers) Probe for any capacity building gaps that can be improved.
29. How might the roads construction affect the trends of HIV and AIDS?

30. What should be done during and after construction to minimize the effects of HIV and AIDS? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B: CHILDREN'S RIGHTS &PROTECTION

20. Comment on the trend children's rights in this area (Probe for knowledge, attitudes, practices in relation to children's rights)
21. What are the major Child rights abuses in this community? (Probe for Child Labor, Defilement, Child Sacrifice, Rape, emotional abuse, neglect, and physical abuse like battering)
22. What are the triggers of the child rights abuses? Who are the perpetuators?
23. What are the existing Protection Mechanisms in Place in this community? (Probe for formal and informal Institutions, Laws, Bylaws, Ordinances, networks etc)
24. Where are the child rights abuses cases reported? Who reports the cases?
25. How will the roads project affect child rights during, and after construction?
31. What should be done to prevent child rights abuses during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C: DISABILITY

10. Comment on the Knowledge, Attitude and Practice of this community to PWDs?
11. What are the major forms of disabilities in this community?
12. What are the existing systems to improve the life of PWDs in this community?
13. How will the proposed roads project affect the life of PWDs during and after construction?
32. What can be done to mitigate the negative effects of the road to PWDs during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION D : GENDER RELATIONS

18. What is your comment on Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
19. Why is the trend like that?
20. Who are the perpetuators?
21. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
22. How will the road project affect the Gender relations?
33. What Gender concerns should be put in consideration to minimize gender related problems during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION E: COMMUNITY ACCESS TO INFORMATION

12. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
13. How will the roads project affect the existing channels of information?
14. How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

Thanks for your time and Cooperation

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT

IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

KEY INFORMANT INTERVIEW GUIDE FOR DHO, HEALTH WORKERS AND HEALTH RELATED CSOs

(Note to the Interviewer: Remember to locate Date and time of interview, Name, Title, Years in Organization, Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this data collection exercise.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under the Albertine Region Sustainable Development Project (ARSDP). The Studies are done to get stakeholders' views about the project and to fulfill Uganda's Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be treated confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A: HIV AND AIDS

34. What is your comment on HIV and AIDS trends in this area?- how is the situation, which categories are most affected? How are they affected? Which parts of this area are most affected? How has HIV affected poverty? Has HIV increased or reduced or stagnanated?
35. What explains the trends above?
36. Who are the most affected and why? (probe for categories like truck drivers, youths, bar operators, widows, orphans, fishing communities, etc)
37. What HIV and AIDS response mechanisms are in place? (Probe for different Prevention, Support, Care and Treatment services and service providers) Probe for any capacity building gaps that can be improved.
38. How will the roads construction affect the trends of HIV and AIDS?

39. What should be done during and after construction to minimize the effects of HIV and AIDS? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B: GENDER RELATIONS

23. What is your comment on Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
24. Why is the trend like that?
25. Who are the perpetuators?
26. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
27. How will the road project affect the Gender relations?
28. What Gender concerns should be put in consideration to minimize gender related problems during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C : HEALTH (CHECK LIST HEALTH CENTER RECORDS, DISTRICT HMIS REPORTS)

1. Existing health units, Access (Distance and Access), Mode of transport, child and maternal health, major diseases, mortality and morbidity

SECTION D: SOCIAL AMENITIES

6. What are the existing social amenities (electricity, water, health centers, hospitals, green spaces, beaches, schools, etc)
7. How will the road projects affect the existing social amenities?
8. What can be done minimize the effect on these amenities? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION E : COMMUNITY ACCESS TO INFORMATION

15. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
16. How will the roads project affect the existing channels of information?

How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT

IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

KEY INFORMANT INTERVIEW GUIDE FOR CAO, LABOUR OFFICER AND SUB COUNTY CHIEFS

Note to the Interviewer: Remember to locate Date and time of interview, Name, Title, Years in Organization, Gender of interviewee, Place of the Interview in the recording sheet)

Greetings,
My name is _____ taking part in this data collection exercise.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under the Albertine Region Sustainable Development Project (ARSDP). The Studies are done to get stakeholders' views about the project and to fulfill Uganda's Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be treated confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A: GENDER RELATIONS

29. What is your comment on Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
30. Why is the trend like that?
31. Who are the perpetuators?
32. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
33. How will the road project affect the Gender relations?

34. What Gender concerns should be put in consideration to minimize gender related problems during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B: EMPLOYMENT AND LABOUR

7. Comment on the unemployment/ employment trends in the last 5 years in this community?
8. What are the trends on labor force supply (Probe for skills, composition of Females and Males, job categories)
9. For those who are employed, what are the most common Labour rights issues in the community?
10. What are the available safety nets to protect workers in this community? Probe for institutions, networks, coalitions, unions, etc) Probe for any capacity building gaps that can be improved.
11. What labour concerns will the road projects have during and after construction?
12. What can be done to minimize the negative impacts on labour and employment during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C : SOCIAL AMENITIES

9. What are the existing social amenities (electricity, water, health centers, hospitals, green spaces, beaches, schools, etc)
10. How will the road projects affect the existing social amenities?
11. What can be done minimize the effect on these amenities? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION D: COMMUNITY ACCESS TO INFORMATION

17. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
18. How will the roads project affect the existing channels of information?
19. How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)
IN CONJUCTION WITH BULIIISA LOCAL GOVERNMENTS

KEY INFORMANT INTERVIEW GUIDE FOR TEACHERS, SECRETARY FOR EDUCATION

(Note to the Interviewer: Remember to locate Date and time of interview, Name and Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this data collection exercise.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under the Albertine Region Sustainable Development Project (ARSDP). The Studies are done to get stakeholders' views about the project and to fulfill Uganda's Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be treated confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A: CHILDREN RIGHTS

26. Comment on child rights trends in this area
27. What are the major Child rights abuses in this community? (Probe for Child Labor, Defilement, Child Sacrifice, Rape, emotional abuse, neglect, and physical abuse like battering)
28. What are the triggers of the child rights abuses? Who are the perpetuators?
29. What are the existing Protection Mechanisms in Place in this community? (Probe for formal and informal Institutions, Laws, Bylaws, Ordinances, networks etc)
30. Where are the child rights abuses cases reported? Who reports the cases?
31. How will the roads project affect child rights during, and after construction?
32. What should be done to prevent child rights abuses during and after construction? Who will do this? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B : COMMUNITY ACCESS TO INFORMATION

20. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
21. How will the roads project affect the existing channels of information?
22. How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

Thanks for your time and Cooperation.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT
IN COLLABORATION WITH HOIMA AND BULIIISA LOCAL GOVERNMENTS

KEY INFORMANT INTERVIEW GUIDE FOR UGANDA POLICE

(Note to the Interviewer: Remember to locate Date and time of interview, Name and Gender of interviewee, Place of the Interview in the recording sheet)
(Note to the Interviewer: Remember to locate Date and time of interview, Name, Title, Years in Organization, Gender of interviewee, Place of the Interview in the recording sheet)
Greetings,
My name is _____ taking part in this data collection exercise.
The Ministry of Lands, Housing and Urban Development together with the District Local Government is in the final process of consulting stakeholders to complete the Environmental and Social Impact Assessment for different roads to be improved in this area under the Albertine Region Sustainable Development Project (ARSDP). The Studies are done to get stakeholders' views about the project and to fulfill Uganda's Laws and Development Partner requirements. You have been identified as a key participant in this exercise by giving your views. The information given will be treated confidential and is intended to complete the Project preparations as required.
I therefore request you to give me part of your time to respond on the following themes.

Thank you.

SECTION A : GENDER RELATIONS

35. What is your comment on the trend of Gender relations in this community (Probe for access, ownership and control of productive resources, male domination, widow inheritance, Gender Division of labour, Discrimination of women in public affairs like places of worship, girl education, early marriages, bride wealth, and equal opportunities for women?)
36. Why is the trend like that?
37. Who are the perpetuators?
38. What protection mechanisms are in place to empower the female gender? Probe for any capacity building gaps that can be improved
39. How will the road project affect the Gender relations?

40. What Gender concerns should be put in consideration to minimize gender related problems during and after construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION B : SECURITY AND PEACE BUILDING

6. What have been the security trends in the last 5 years? Has there been any armed conflict?
7. Who ensures that there is peace in the community? Probe for formal and informal institutions, and leaders
8. What is the crime rate like in the community?
9. How will the project influence crime rate?
41. What should be done to mitigate crime rate during and after construction? Probe on how the reporting of such crime or complaints should be done. (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION C : CHILDREN RIGHTS

33. Comment on child rights trends in this area
34. What are the major Child rights abuses in this community? (Probe for Child Labor, Defilement, Child Sacrifice, Rape, emotional abuse, neglect, and physical abuse like battering)
35. What are the triggers of the child rights abuses? Who are the perpetuators?
36. What are the existing Protection Mechanisms in Place in this community? (Probe for formal and informal Institutions, Laws, Bylaws, Ordinances, networks etc)
37. Where are the child rights abuses cases reported? Who reports the cases?
38. How will the roads project affect child rights during, and after construction?
42. What should be done to prevent child rights abuses during and after construction? Who will do this? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION D: SOCIAL AMENITIES

12. What are the existing social amenities (electricity, water, health centers, hospitals, green spaces, beaches, schools, etc)
13. How will the road projects affect the existing social amenities?
43. What can be done minimize the effect on these amenities? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

SECTION E : COMMUNITY ACCESS TO INFORMATION

23. How does the community access information in this area? Probe for key institutions, resource persons, the medium, frequency of information and effectiveness
24. How will the roads project affect the existing channels of information?
44. How should information be delivered to the community during and after the roads construction? (Probe on who can do it, what capacities does the District have? What are the capacity gaps?

Thanks for your Time and Cooperation.

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
ALBERTINE REGION SUSTAINABLE DEVELOPMENT PROJECT (ARSDP)
Organizations Profiling Data Collection Tool

Name of District:_____

Type of Organization	**Name of the Organization and Office Location**	**Contact Person, Title and Address and phone number**	**Areas of Work (eg, Child Protection, Livelihoods, Child and Maternal Health etc**	**Geographical coverage (list name of the Sub Counties)**
Non-Governmental Organizations which are supportive institutional mechanisms to the government	1			
	2			
	3			
	4			
Voluntary Organizations whose members form an institution on voluntary basis with specific social goals. e.g. youth associations	1			
	2			
	3			
	4			
Self Help Groups are those, which	1			

come together to help themselves and achieve development.	2			
	3			
	4			
Community Based Organizations are those, which constitute the members of the community working towards social development. E.g. Agriculture, irrigation, thrift, Women empowerment etc	1			
	2			
	3			
	4			
Pressure or Activist Groups have political agendas and work closely with people and highlight social issues through specified tactics and organizational goals	1			
	2			
	3			
	4			

Trusts are organizations, which are managed by a group of people. They are more or less funding agencies that may work towards social development	1			
	2			
	3			
	4			
Common Interest Groups are formed due to people who come together pursuing a common interest. E.g. Trade, market, user, farmer association.	1			
	2			
	3			
	4			
Faith Based Organizations are religious institutions propagating religious principles but are also involved in many social development activities.	1			
	2			
	3			
	4			

Government Driven Organizations, which are informal in nature but work closely with the government for achieving social development goals	1			
	2			
	3 4			
Private Sector Organizations	1			
	2			
	3			
	4			

MLHUD UTILITIES / SOCIAL AMENITIES INFRASTRICTURE DATA COLLECTION SHEET

Name of Road:_____ Village_____

Parish_____ Sub County_____ District_____

Chainage	Name of Utility/Infrastructure	Distance from the Center of the Road	Comment

APPENDIX 24: WORKERS' CAMP ESTABLISHMENT, OPERATION AND DECOMMISSIONING GUIDELINES

*Step	Description	Responsibility
Needs assessment	During this stage, the Contractor shall review the contractual Labour Force requirements to ascertain whether accommodation for workers is required. Shoud assessment affirm the need, the Contractor shall establish whether accommodation can be provided within existing local communities or whether new facilities should be constructed. The likely impact on local communities and the housing market of either option should be assessed.	Contractor, Local Communities, Buliisa District Local Government (DLG) and MLHUD.
Impact Assessment	Before constructing any facilities, other potential social and environmental impacts should be evaluated. These may include the impact of construction, and the effect of a new housed labour force on community services, such as health, and on community cohesion and safety. These assessments should form part of a project's Environmental and Social Impact Assessment and result in an Environmental and Social Management and Monitroing Plan (ESMMP) for the proposed workers' camp.	Contractor
Site acquisition and statutory approvals	The contractor shall engage the local communities and the District authoritities in identification of a suitable site for the location of a workers' camp. The camp shall be located at reasonable distance from sensitive receptors such as schools, Health Centres, places of worship, trading centres, administrative facilities, nature reserves, among others. The contractor shall enter into a lease with the owner of the site, witnessed by the area Local Councils and copies of the duly	Contractor, Local communities, DLG, MLHUD and NEMA.

	executed agreement shall be submitted to the DLG and MLHUD. The Environmental and Social Management and Monitoring Plan (ESMMP) and the designs of the workers' camp shall be prepared and subjected to approval by the appropriate Authorities including the National Environment Management Authority (NEMA).	
Development of standards and Codes of Conduct	The contractor shall with the approval of the DLG and MLHUD, develop standards for safety and health management, protection of children (VAC), public smoking, gender based violence (GBV) sanitation and waste management, site clinic, food safety, Grievance Redress Managemetn (GRM), Site Councils, work and leisure management, Tool Box Talks, HIV/AIDS control, public relations, security, among others.	Contractor
Contruction of the facility	Upon approval of the designs, material and labour sources, standards, codes of conduct and ESMMP of the Workers' Camp by MLHUD and NEMA, the construction of the facility shall commence. The DLG and MLHUD shall supervise and enforce the material and labour sourcing as well as excution of the approved designs and ESMMP.	Contractor, DLG and MLHUD
Operation and Maintenance	Upon construction of the camp facilities, there are issues around its operation and management. These include the type of staff who will manage it and enforcement development of appropriate management policies, such as security and grievance procedures, sanitation and waste management, child protection (VAC), gender based violence (GBV), site safety standards for workers and visitors and ongoing liaison with local communities. The compliance to the approved Workers' Camp policies shall be monitored and	Contractor, DLG and MLHUD.

	enforced by the DLG, MLHUD and other relevant regulatory agencies. To ensure resonance with the realities and changing environmental and socio-economic conditions, the site policies shall be subject to regular review by the Contractor, DLG, MLHUD and relevant regulatory agencies.	
Decommissioning	The Contractor shall prepare and submit an updated decommissioning Plan to the DLG and MLHUD for review and approval. Upon approval of the decommissioning plan and completion of the civil works, the contractor shall take all necessary steps to salvage, reuse, recycle, and /or demolish the workers' camp facilities in conformitiy with the approved ESMMP and the site acquisition agreement. Hazadours Waste Handling firms shall be engaged by the Contractor to dispose hazadours waste, where necessary. A Camp Grievance Redress Report shall be prepared showing how outstanding site complaints have been resolved. A decommissiong report shall be prepared by the contractor's safeguards staff and submitted to the DLG and MLHUD.	Contractor, Hazadours waste handling firms, DLG and MLHUD.

*Adopted and modified from IFC and EBRD (2009)

APPENDIX 25: MEASURES FOR REINSTATEMENT OF DEEP CUTS AND GENTLE SLOPES

1.0 Introduction

For the most sections of the roads, substantial volumes of soil will stay undisturbed. However, on steep slopes and embankments, there will be increased risk of erosion during cut and fill. And as such, it will be critical for the contractor to put as much effort as possible into actions that will stop the soil from being washed. This could potentially make the area that has been eroded barren, but it could also adversely affect water supply and introduce pollutants. Additionally, it could take decades to rebuild a more productive layer of topsoil, so it essential to have some insight on how to keep topsoil in place. Below are some of the methods that shall be used to prevent or stop erosion on steep slopes;

2. Slope protection methods

2.1 Planting Grass and Shrubs

Plant roots tend to hold soil together, making it harder to erode. This makes grass and shrubs effective in stopping soil erosion (DENBOW, 2017). In addition, the leaves of the plants reduce the velocity of raindrops falling on the ground, making it harder for them to dislodge the soil and erode it. Ornamental grass and low, spreading shrubs provide a buffer and protect would be bare soils from exposure to the erosion elements such as wind or water.

2.2 Application of Erosion Control Blankets to Add Vegetation to Slopes

There are several types of fiber, biodegradable, and compost blankets /mats that have been designed to minimize the effects of water erosion on slopes and embankments. Rolled mats are usually made from mulch that is held together by a fiber mesh. They degrade slowly, allowing vegetation that may have been grown in the area to grow and take over the job of protecting the soil from erosion when the mats have finally decomposed. Compost erosion control blankets act similarly to mulch products but provide organic nutrients that promote vegetation growth, even in areas where germination, moisture management and irrigation could be challenging.

2.3 Construction of terraces

To control the erosion on very steep slopes or embankments, where planting vegetation may not be possible, the contractor shall build terraces to help slow down erosion as the vegetation takes hold. Terraces can be made from wood, concrete blocks or bio-mechanical solutions like the Cascadia Green Wall that uses Filter Soxx with natural mulch/seed filling and geogrid for structural stability. The beds that are created by the terraces can then be used to plant vegetation such as ornamental plants or grass.

2.4 Construction of drainage diversions

Depending on the incline of the slope or embankment, one of the most effective ways to help prevent erosion is to create diversions which will channel excess water down the slope along a predetermined path. One of the simplest ways to do this is to create open ditches or drains by digging along the slope at regular intervals. Where applicable, the Contractor shall design and install pipes and gutters to drain excess water from steep slopes as these will work just as well as natural drains. However, the drainage must be directed to locations that are at safe distance from human settlement, crop fields or facilities that may include among others; churches, schools, trading centres and health centres, to avoid floods.

APPENDIX 26A: PROTOCOLS FOR PREVENTING AND MANAGING VIOLENCE AGAINST CHILDREN

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project (ARSDP)

PROTOCALS FOR PREVENTING AND MANAGEMENT OF VIOLENCE AGAINST CHILDREN CASES DURING CIVIL WORKS

1.0 DEFINITION OF VIOLENCE AGAINST CHILDREN

Article 19 of the UN Convention on the Rights of Children (CRC) defines "'violence' all forms of physical or mental violence, injury and abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse"
Violence against children refers to all acts of violence inflicted on boys and girls below 18 years.

2.0 THE SETTINGS OF THE VIOLENCE AGAINST CHILDREN

Violence Against Children may take place in different setting which include the following;

a) Violence in the home and family: Includes infanticide, physical, psychological and sexual violence
b) Violence in schools and education settings: This includes violent and humiliating discipline, physical, emotional, and sexual violence and harassment, and bullying in special schools (including military schools) and mainstream schools.
c) Violence in institutions: Includes violence in alternative care situations such as orphanages, foster and other care homes, NGO shelters, and institutions for disabled children and young people.
d) Violence in the community and on the streets: Including children in conflict with the law, gang violence and children and young people involved in organised crime, but not "war" situations. Also includes private security guards, death squads and vigilantes, as well as harmful traditional practices.
e) Violence in work situations: Includes children in domestic work, trafficking (for forced labour and sexual exploitation), commercial sexual exploitation, (includes sex tourism), and child labour in hazardous conditions.

3.0 CAUSES OF VIOLENCE AGAINST CHILDREN

There are many factors that are contributing to violence against children and these may vary from region to region, age of children as well as a social- economic context.

a) Collapse of traditional social networks or systems and family supports
b) Harmful religious or cultural beliefs,
c) Poverty and high levels of vulnerability i.e. dependency on others, physical or mental vulnerabilities, ignorance about potential threats, lack of family support or guardians, age,
d) Substance abuse,
e) War and displacement,
f) Corruption which undermines access to fairness and justice,
g) Persistence of harmful/negative traditional practices,

h) Limited availability of resources, such as food, shelter, medical facilities and services, clothes, and water among others,
i) Limited functionality of existing child protection and support services such as the police protection or other security.
j) General lawlessness
k) Community lack of awareness or belief in human rights for all especially the rights of children

4.0 IMPACT OF VIOLENCE TO CHILDREN

a) Violence against children undermines the security and safety of children as well as inflicts pain, suffering and fear.
b) Violence against children threatens children's attendance to school,
c) and in school it is a threat to children retention and performance;
d) and in worst cases may end children's right and opportunity to quality education.
e) the psychological and emotional damage to the child as a result of violence.
f) Violence against children undermines the child's sense of self-worth which damages hers or his potential to take advantage of the existing opportunities including learning as well as personal initiative.
g) Cases of children that have suffered serious physical injuries including permanent disabilities, and mental damage, and death as a result of violence are many.

4.1 IMPACT OF VIOLENCE AGAINST CHILDREN ON ARSDP

VAC as a result of the project and ultimately civil works can have subtle impacts on the project in the following ways;

a) Failure of the project to meet intended benefits to the community
b) Eroding community ownership and support
c) Suspension of the contractors
d) Termination of the contractors
e) Huge penalties to the contractors thereby increasing the costs of the projects
f) Instituting criminal charges to contractors and workers
g) Suspension of the project
h) Delay of project implementation
i) Termination of the whole project in extreme cases

5.0 PREVENTING VIOLANCE AGAINST CHILDREN DURING AND AFTER CIVIL WORKS

All measures should be made to ensure zero cases of any form of violence against children related to the project during and after civil works. The preventive measures include but not limited to the following;

a) All contractors, workers, suppliers, representativity, agents and other categories including site visitors to sign and comply with the Child Protection Behaviour Protocol (Appendix I)
b) Ensure that No child is employed by the contractors, suppliers or agents
c) Restrain contractor workers from interacting with children during civil works
d) Sensitize community and committees in child protection
e) Involving the Uganda Police, Probation Officers and Local councils in vetting contractor workers before starting their employments to track criminal record including record of violence against children
f) Supporting functional child protection committees in schools near the sub-projects
g) Engaging other child protection advocates partners like Non-Government Organizations to continuously monitor, detect, report, refer and follow up cases of violence against children
h) Putting heavy penalties including termination of contract and litigation of contractors and workers who commit VAC

i) Flexing working schedules during civil works, for example civil works should take place over weekends on road sections that are closer to schools.

6.0 REPORTING VIOLENCE AGAINST CHILDREN (VAC) CASES

A report refers to a verbal or written statement or account on the form of violence encountered by the child. The report should cover a record on what happened; according to the child survivor or victim and other people who witnessed the act of violence. The report should also highlight what was observed, heard, done or investigated, the place where and time when the incident took place. The report forms are provided under Appendix I.

7.0 ACCESSING KEY CONTACTS TO FACILITATE TIMELY REPORTING OF VAC

During civil works, the telephone contacts of the area Local Councils, the Sub County Technical and Political leaders including LCIII Chairperson, area Councillors, Sub county Chief, Community Development Officer and Parish Chiefs, the key District leaders including the LCV Chairperson, the Secretary for Children, the District Probation Officer, the District Labour Officer, the District Community Development Officer, the key contacts for Uganda police Posts and Department of Children and Family Affairs department of Uganda Police, the National stakeholders contacts including Child help line (116), the Project coordinator for ARSDP and the Social Development Specialist will be provided to the communities and shall be made available and accessible at all sites.

Local NGOs and CBO contacts will also be shared to ensure the effective involvement of the NGOs and CBOs in child protection.

8.0 IMPORTANCE OF REPORTING CASES OF VIOLENCE AGAINST CHILDREN

a) Reporting cases of Violence Against children is important and all stakeholders, individuals (Children or Adults) and other actors should at all times report any suspicion or any cases that have occurred related to Violence Against children. Reporting helps in the following ways;
b) Helps to establish the nature of violence inflicted on a child
c) Helps to establish the details of the offender/ perpetuators and dealing with them in accordance with the laws
d) Helps to identify the impact of the offence on the child
e) Helps to identify appropriate support services for the recovery and reintegration of the victim
f) Helps in enhancing referral of the affected child for more support
g) Helps in tracking and monitoring the progress of social justice to offenders
h) At strategic level, reporting can contribute to deterrence of future crimes against children in communities
i) During civil works, reporting creates basis for heavy administrative penalties to contractors including termination of contract and instituting legal proceedings against suspected offenders

9.0 STEPS IN REPORTING CASES OF VOILENCE AGAINST CHILDREN

Once the child survivor, or any other child, parent, guardian, worker, or any concerned individual reports any case of violence, the person(s) receiving the cases should take the following steps:

Step 1: Getting the Details

Talk to the child survivor in a friendly manner and capture as much information as possible on the form of violence i.e. the child's views, feelings and interests. Where possible encourage the child survivor to use other communication channels such as the national hotline (116) and report the case of violence to other actors.

Step 2: Documenting the Details of the Case

Based on the interaction with the child survivor or victim (CSV), complete the Report Form (Appendix I for the CSV and alleged perpetuator). Where possible record the child survivor or victim's (CSV) voice and

take pictures as part of the report. You should ensure ensure the safety, security, privacy, confidentiality, and support of the Child Survivor or Victim.

Step 3: Preparing Witnesses to engage other Legal Actors like Police and Probation Officers

Gather more information from other people that witnessed the violence. Find out if these witnesses are willing to appear (in person) before other actors like police, probation and courts of laws if need arises for further investigations on the case. Ensure that the information gathered and recorded is reliable.

Step 4: Establishing the Appropriate Procedure to be Taken

Based on the information provided by the CSV and other people that witnessed/heard/have prior knowledge on the act of violence, establish the form of violence encountered and the appropriate procedures to take. It is important to note that the procedures vary depending on the form of violence, impact of the violence on the child based on the existing legal framework.

The following Table 1 provides more details on the minimum procedures for selected cases of Violence Against Children.

Table 1: The Standard Operating Procedure for Selected Violence Against children cases

Forms of violence	Relevant law(s)	Minimum procedures and ingredients	Centres of responsibility
Defilement	The Domestic Violence Act (2010)	1. Report and register complaint with the police. 2. Subject the CSV to medical examination on Police Form 3 and its Appendix and victim must be escorted by a female police officer to a medical doctor or police surgeon to prove the age of victim, the suspects involved and the exhibits involved. The Health workers should provide medical treatment to the child survivor based on the recommendation of the medical examination report. 3. Police to interview the CSV and record her/his statement to establish her/his age of victim, the exhibits involved, the date, time, and place of offence. 4. Police to interview the witnesses and record their statements including obtaining circumstantial evidence if any. 5. Police to visit scene of crime and recover ex-hibits if any e.g. knickers, semen, bed sheets, clothes worn by both victim and suspect. 6. Police to secure the exhibits and have them parked and sealed properly and forwarded immediately to government experts for analysis and comparison. 7. Police to subject the suspect for medical examination on Police Form 24 to prove her/his mental status, age, HIV sero-status, and erection capacity. 8. Police to interview the suspect and record his/her statement, charge and caution statements, recover exhibit from suspect if any, finger prints, photograph. 9. Police to subject the suspect to medical examination to extract semen/blood from the suspect. 10. Police to record statements from the arresting Officers, Officers who visited the scene of crime, Investigating officers and other witnesses. 11. Police to refer the case to Courts of law for hearing and sentencing the perpetrators as well as decide on compensation for the CSV.	CFPU, SGBV and Child Related Offences Department

Forms of violence	Relevant law(s)	Minimum procedures and ingredients	Centres of responsibility
Other forms of violence such as physical violence including corporal punishment, neglect	Domestic violence Act	1. Allow the child to tell his/her story and do not pressure the child to talk. 2. Reassure the child by validating their feelings and let child know that you are glad they told you, that the violence is not their fault, and that no one should be hurt. 3. Inform the Child of what your next steps are and what they should expect as well as support her/him to make choices whenever possible. She/he may want time away from the class after making a disclosure and may prefer to stay at home or to re-join their class. 4. Determine the nature of the violence. 5. Statutory child maltreatment such as neglect, grave physical violence or aggravated corporal punishment, must be reported to the Police. 6. Non -statutory child maltreatment with no serious risk are referred to Local Council, church, mosques, employers, contractor, supervising consultant, committees like roads committees, Community Development Office at the Subcounty, probation office and Local Council Courts for action. 7. The receiving office including the contractor should Document disclosure and your response according to the child protection policy.	Uganda Police, Local Council, church, mosques, traditional leaders, employers, contractor, supervising consultant, committees like roads committees, Community Development Office at the Subcounty, probation office and Local Council Courts for action.
Child trafficking	Trafficking in Persons Act, 2009	Report and register complaint with the nearest LC and Police.	CFPU, SGBV and Child Related Offences Department

Step 5: Producing Comprehensive Report

Produce a complete/comprehensive report on the case to enable the duty bearers to assess the case and take appropriate actions. The report should highlight follow up actions including support services required by CSV.

Step 6: Submitting the report to Duty Bearers

Submit the report to police for further investigations. In order to maintain confidentiality and privacy, the report on the case should only be shared with the actors that have a key role/action to take within the stipulated time from when the violence took place. For instance, cases of defilement must be reported to police within 48 hours.

Step 7: Follow up VAC cases

Follow-up the CSV to ensure that he/she accesses appropriate support services.

10.0 LEVELS OF REPORTING, TRACKING AND REFERRING VAC CASES AND RESPONSIBILITIES OF KEY ACTORS

Who Reports?	What Actions and support is to be provided?	Where should the case be Referred?
Child	• Reports to the senior teacher, class teacher, student leader, parent or guardian, matron or patron, • Makes a statement providing details on what happened, form of violence, perpetrator, names the witnesses.	
Community Persons including parents, guardians, Roads Committees, Project Management Committees, Grievance committees, contractor's worker, Faith based member like church members, CBOs and NGOs	• Reports the case and perpetuator immediately to nearby Local Council, or Church, or Contractor's supervisor, Local Government Personnel like Probation Officer, Parish Chief etc for further action.	Refers the case to LC and Police for further investigation.
Teachers	• Listens to the child and records the case verbatim, • Examines the child in case of physical abuse, • Counsels the child and guides or explains to the child on required procedures that have to be taken and why, • Reports the case to the Head Teacher. • Liaises with other actors and ensures that child survivor gets support services such as medical care and check-up, counselling and other basic needs such as food.	Refers the case to the Head Teacher and other actors for specialised services such as medical care or check-up. Refers the case to LCs and Police for further actions
School Management Committees	• Follow-up the case with LCs, Police, health services and courts of law.	Refers to Police for further actions

Who Reports?	What Actions and support is to be provided?	Where should the case be Referred?
Local Council	• Records the case and proceeds to hear the case according to the Local Council Courts Act, 2006, • LC courts decide on measures to be taken and implements accordingly, • Produces a report and may refer the case to Police for further investigation if the case cannot be handled by the LC Court or if the parents of the survivor are not satisfied with the decision of the LC Court, • Refers the child survivor to the Probation office for support services.	Refers the case to Police for investigation
Police	• Investigates the case, • Signs the PF3 forms and other sources of evidence to support court proceedings, • Supports the child survivor to access required support services and evidence such as a medical report.	Refers the case to courts of Law for hearing and sentencing
Probation and Social Welfare Officer	• Assess the needs of the child survivor/victim and refers the child to services providers for appropriate support services, • Collects data and information on the child survivor/victim for processing and management	Reports to Police
Medical Centre	• Medical Examination for bodily harm or other injuries caused, • Produces medical report for police investigations and other evidence for the courts of law, • Provides medical care for the child survivor to ensure recovery.	Reports to the Police and to the Courts of Law as evidence against the perpetrator.
Courts of law	• Hears the case, decides on support services to the child survivor or the parents of the child victim, • Sentences the perpetrator according to the existing laws regarding the case.	Refers the person found guilty to prisons or community to serve his/her sentence
Prison	• Ensures that the person found guilty serves his/her sentence, • Person is rehabilitated.	Freed at the end of serving the sentence.
Ministry of Lands, Housing and Urban Development (Implementing Agency for	Ensure that the Civil works contracts have strong penalties for contractors and workers involvement in VAC Monitors VAC cases in the community and assesses any cases involving the contractors and their workers	Ensures zero occurrence of VAC cases in relation to the Project.

Who Reports?	What Actions and support is to be provided?	Where should the case be Referred?
ARSDP) and the District Local Governments	Make follow up to ensure that all cases are judiciously managed Liaise with other MDAs to ensure appropriate actions to the VAC victims and offenders	

NB:

1. The Sub County Coordination Committee will oversee ARSDP activities in the respective Sub Counties and the Community Development Officer shall be the focal person for Violence Against Children and will take responsibility of collecting and compiling all VAC related matters including cases from the LCs, Roads committees, Parish chiefs, Schools, Contractors, Site supervisors, and Uganda Police for discussion and follow up in the Sub county and District as entailed in the Guidelines for Coordination Committees.
2. In the progress reports of Contractors, Violence Against children shall be among the components of the reports by clearly detailing with evidence efforts undertaken by contractors to prevent and detect VAC. Any cases of VAC, the victims' details, perpetuators' details, actions undertaken to the victim and family, as well as to the perpetuator, and implications of each VAC case to the contract shall be properly documented and be part of the contractors' progress report.

Appendix I: Reporting Forms for VAC Cases

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project (ARSDP)

REPORTING FORM FOR VIOLENCE AGAINST CHILDREN CASES
(To be printed in A3 booklet with percolated papers and duplicates)
(To be used by Road Committees, Grievance Committees, Schools, Local Councils, NGOs and CBOs and other designated Entities on Child Protection during Civil Works)

Part 1: Details of the Reporter

Name of the Person reporting the case	Address: Location:	Date of reporting the case:
Designation and relationship with the child victim and survivor	Contact details; Tel. No (Landline): Tel. No (Mobile): Email:	Time of Reporting:

Part 11: Child Survivor/victim information

S/N	Indicators	Details captured
1.	Name of the child and her or his photo (to be coded for future investigation and ensure confidentiality	
2.	Sex	
3.	Date of birth and Age	
4.	Residence	
5.	Contacts- telephone	
6.	Reference number	
7.	Nature/type of the alleged act of violence:	
8.	Location: where the incident took place	
9.	Number of times the child has encountered such a form of violence	
10.	Other associated forms of violence the child has encountered by the alleged perpetrator	
11.	Relationship of the Child with the alleged perpetrator	

12.	Impact of the act of violence on the child – state of the child i.e. physical, mental, feelings	
13.	Date or time frame of the act of violence	
14.	Witnesses (if any) and their observations and their willingness to appear in case of further investigations and their telephone contacts	
15.	Status of reporting (if there are previous efforts of reporting the case and the person/officer reported to	
16.	Measures or actions taken	
17.	Outcomes of the measures if any	
18.	Recommended actions and support services for the child survivor/victim	
19.	Witnesses Name: Address: Contact number:	Describe the event as witnessed:
20.	Any other information found necessary to support the case- photographic or recorded evidence	
21.	Form compiled by: Name: ---------- -------Signature: ---------- ---------- -	Position---------- Date----------

Part III: Details of the Alleged perpetuator

Notes	Attach all the necessary supporting information or documents and remember to retain a copy for follow-up and complete the referral data base form.

S/N	Indicators	Details captured
1	Name of the alleged perpetrator (attach a photo) if available and willing to provide the information required	
2	Sex	
3	Age if known	
4	Residence	
5	Marital status	

6	Contacts- telephone	
11	Consent or non-consent of the perpetrator on committing the act	
12	Previous incidents of violence against children committed by the alleged perpetrator	
13	Measures taken by the duty bearers and other stakeholders against the perpetrator	
14	Outcomes of the measures if any	
15	Recommended actions against the perpetrator	
16	Any other information found necessary	
17	Form compiled by: Name: ---------- Signature: ---------- Position:---------- Date:----------	Contact details: Tel:----------Email:----------

Appendix II: Child Protection Behavioural Protocol to be Signed by Contractors, Workers, Suppliers, Representatives and other Partners including site Visitors

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project (ARSDP)

Child Protection Behaviour Protocol for Contractors, Workers, Suppliers, Representatives and any Partners including Site Visitors

Protection of Children Against all forms of Violence is very important to the successful implementation of the Albertine Region Sustainable Development Project. The Ministry of Lands, Housing and Urban Development and the Local Governments uphold the provisions of the conventions on the Rights of the Child that form the basis of equal rights to survival, health, education, protection and participation during after civil works. The National legal frameworks provide for several policies and laws that guarantee children from any form of abuse and these will form the cornerstone of ensuring effective project implementation.

Therefore, all Government of Uganda partners, Ministries, Departments, and Agencies including Local Governments, community structures like committees, contractors, supervising consultants, suppliers, and site visitors are expected to protect children and desist from any actions or attempts that violate the rights of children as enshrined in the National Laws and International Conventions and Standards.

Violence Against children is a crime and will always be reported and dealt with to the relevant authorities. Any inappropriate behaviour toward children, including failure to follow this Behavioural Protocols is enough ground for termination of the contract with a staff, contractors, consultants, suppliers and any other partners.
The contractors, supervisors, staff, suppliers therefore take full responsibility in promoting the rights of children at all times and any breach of this protocol forms substantial reason to terminate any contract and as well instituting criminal proceedings.

1. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors must be concerned about perception and appearance in their relationship with children in the community.
2. The contractor, his/ her workers, suppliers and representatives shall not hire children for child labour.
3. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors shall not use verbal conduct such as derogatory comments or sexual harassment, invitations, or using power and authority to persuade a child to act in ways that may sexually gratify the adult.
4. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors shall not use visual items of sexual nature or make children feel uncomfortable such as derogatory posters, pornography of any kind, cartoons, drawings or gestures, any form of written communication.
5. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors must not intentionally cause physical pain or injury to a child or do any form of child abuse.
6. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors must not exchange personal information with children (eg. address, phone number, email, Facebook or other social media contacts).
7. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors shall not post child photos, videos and other personal information of children like child home address, school name, school address, community and village landmarks, parents place of employment).
8. Where photographs are to be taken, it should be with the consent of the parent, guardian or responsible person for that child and should always be for purposes of the project and should protect the child from any form of abuse and / or misuse
9. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors should dress properly while in the community/ work place/ workers camp and shall not dress in mini dresses, miniskirts and transparent clothes.
10. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors must show respect for culture and human rights.
11. The contractor, his/ her workers, suppliers, representatives and any partners including site visitors should report immediately to the Local Official, Police Station, Supervisor, MLHUD Officials, Roads Committee members, Local council member, or child safe hotline 116 or Child and Family Protection Unit – (CFPU) - Uganda Police Force 256 714 668 030/ 0714668030 if there is notice or suspicion of any incident of abuse or harm to children in the Project Area.

12. Noncompliance with this protocol will be taken seriously including referring and instituting criminal charges by Uganda Police or the Probation and Social Welfare Officer in accordance with the Law of the Land.

Emergency Contact

In an event of imminent threat of Violence Against Children, Employees should contact _____.
The LC Chairperson: _____
The Sub County CDO: _____
District Probation Officer: _____
The District CDO: _____
The Uganda Police Post/ Station: _____
The Social Development Specialist (ARSDP): _____

DECLARATION OF ACKNOWLEDGEMENT AND COMMITMENT TO ABIDE BY THE CHILD PROTECTION BEHAVIORAL PROTOCAL

I have read and understood, and I undertake to adhere to these Child Protection Behavioural Protocols under ARSDP.

Name: _____
Signature: _____
Title: _____
Organization: _____
Telephone Contact: _____
Physical Address: _____
Date: _____

WITNESSED BY

Name: _____
Signature: _____
Title: _____
Organization: _____
Telephone Contact: _____
Physical Address: _____
Date: _____

APPENDIX 26B: PROTOCOLS FOR PREVENTING AND MANAGING GENDER BASED VIOLENCE

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project (ARSDP)

PROTOCOLS FOR PREVENTING AND MANAGING GENDER BASED VIOLENCE

1.0 INTRODUCTION

Violence against women (VAW), also known as gender-based violence and sexual and gender-based violence (SGBV) is, collectively, any violent act that is primarily or exclusively committed against women and girls. Sometimes considered a hate crime, this type of violence is gender-based, meaning that the acts of violence are committed against women and girls expressly because they are female. The UN Declaration on the Elimination of Violence Against Women states, "violence against women is a manifestation of historically unequal power relations between men and women" and "violence against women is one of the crucial social mechanisms by which women are forced into a subordinate position compared with men.

Some of the forms of violence perpetrated by individuals are: rape, domestic violence, sexual harassment, reproductive coercion, female infanticide, prenatal sex selection, obstetric violence, and mob violence; as well as harmful customary or traditional practices such as honor killings, dowry violence, female genital mutilation, marriage by abduction and forced marriage. Some forms of violence are perpetrated or condoned by the state such as war rape; sexual violence and sexual slavery during conflict; forced sterilization; forced abortion; violence by the police and authoritative personnel; stoning and flogging.
Many forms of VAW, such as trafficking in women and forced prostitution are often perpetrated by organized criminal networks.

However, the commonest types of GBV are defined below;

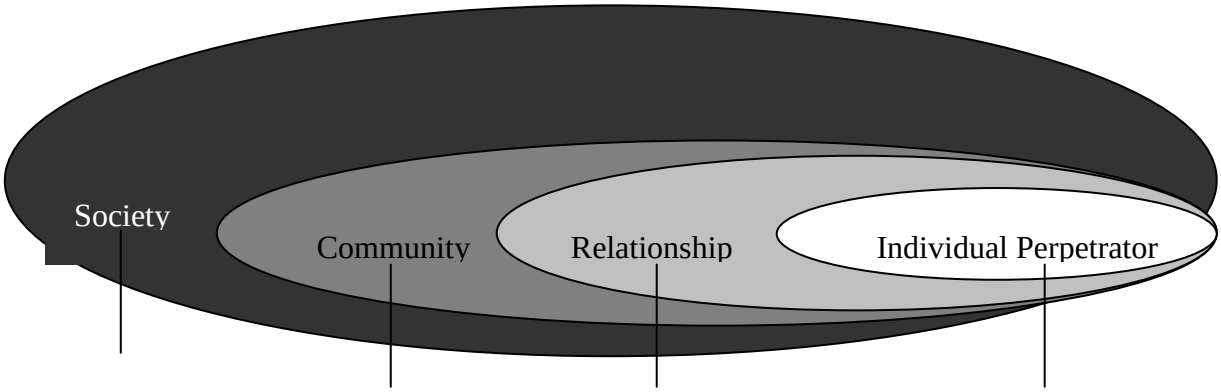
2.0 COMMON TYPES OF GBV.

1. Rape: Rape is a type of sexual assault usually involving sexual intercourse or other forms of sexual penetration carried out against a person without that person's consent. The act may be carried out by physical force, coercion, abuse of authority, or against a person who is incapable of giving valid consent, such as one who is unconscious, incapacitated, has an intellectual disability or is below the legal age of consent.
2. Sexual Assault: any form of non-consensual sexual contact that does not result in or include penetration for example attempted rape, as well as unwanted kissing, fondling.
3. Physical Assault: an act of physical violence that is not sexual in nature. Examples include: hitting, slapping, choking, cutting, shoving, burning, shooting or use of any weapons, acid attacks or any other act that results in pain, discomfort or injury.
4. Forced Marriage: the marriage of an individual against her or his will.
5. Denial of Resources, Opportunities or Services: denial of rightful access to economic resources/assets or livelihood opportunities, education, health or other social services. Examples include a widow prevented from receiving an inheritance, earnings forcibly taken by an intimate partner or family member, a woman prevented from using contraceptives, a girl prevented from attending school, etc. Reports of general poverty should not be recorded.

6. Psychological / Emotional Abuse: infliction of mental or emotional pain or injury. Examples include: threats of physical or sexual violence, intimidation, humiliation, forced isolation, stalking, verbal harassment, unwanted attention, remarks, gestures or written words of a sexual and/or menacing nature, destruction of cherished things, etc.

3.0 CAUSES OF GENDER BASED VIOLENCE

The causes of GBV can be summarized at individual, relationship, community and society level;



- ✓ Norms granting men control over female behaviour
- ✓ Acceptance of violence as a way to resolve conflict
- ✓ Notion of masculinity linked to dominance, honour and aggression
- ✓ Rigid gender roles
- ✓ Inadequate law enforcement

- ✓ Poverty
- ✓ Low socio-economic status
- ✓ Unemployment
- ✓ Associating with peers who condone violence
- ✓ Isolation of women and family

- ✓ Marital conflict
- ✓ Male control of wealth and decision-making in the family

- ✓ Witnessing marital violence as a child
- ✓ Parent/ Guardian absence or rejection
- ✓ Being abused as a child
- ✓ Alcohol use

4.0 IMPACTS OF GENDER BASED VIOLENCE

The effects of GBV vary widely. It depends on the nature of the particular incident, the woman's relationship with her abuser, and the context in which it took place. Gender-based violence typically has interconnected physical, psychological, and social effects.

Physical Impacts

- Physical Injuries
- Disability
- Chronic Health problems like irritability, hypertension etc

- Sexual and reproductive health problems like contracting sextually transmitted diseases including HIV
- Unwanted pregnancies
- Loss of life

Psychological Impacts

- Direct impacts including anxiety, fear, mistrust of others, inability to concentrate, loneliness, post-traumatic stress disorder, depression, suicide, etc.
- Indirect impacts including psychosomatic illnesses, withdrawal, alcohol or drug use.

Economic and social impact:

- Rejection, ostracism and social stigma at community level;
- Reduced ability to participate in social and economic activities;
- Acute fear of future violence, which extends beyond the individual survivors to other members in community;
- Damage to women's confidence resulting in fear of venturing into public spaces (this can often curtail women's education, which in turn can limit their income-generating opportunities);
- Increased vulnerability to other types of gender-based violence;
- Job loss due to absenteeism as a result of violence;

The impact on women's family and dependants:

- Divorce, or broken families;
- Jeopardized family's economic and emotional development
- Babies born with health disorders as a result of violence experienced by the mother during pregnancy (i.e. premature birth or low birth weight);
- Increased likelihood of violence against children growing up in households where there is domestic violence;
- Collateral effects on children who witness violence at home (emotional and behavioural disturbances, e.g. withdrawal, low self-esteem, nightmares, self-blame, aggression against peers, family members, and property; increased risk of growing up to be either a perpetrator or a victim of violence)
- Compromised ability of survivor to care for her children (e.g. child malnutrition and neglect due to constraining effect of violence on women's livelihood strategies and their bargaining position in marriage)

The impact of violence on society:

- Burden on health and judicial systems
- Hindrance to economic stability and growth through women's lost productivity
- Hindrance to women's participation in the development processes and lessening of their contribution to social and economic development.
- Constrained ability of women to respond to rapid social, political, or economic change.
- Breakdown of trust in social relationships weakened support networks on which people's survival strategies depend.

- Strained and fragmented networks that are of vital importance in strengthening the capabilities of communities in times of stress and upheaval

5.0 IMPACT OF GBV RISKS TO THE PROJECT

GBV as a result of the project and ultimately civil works can have subtle impacts on the project in the following ways;

- Failure of the project to meet intended benefits to the community
- Eroding community ownership and support
- Suspension of the contractors
- Termination of the contractors
- Huge penalties to the contractors thereby increasing the costs of the projects
- Instituting criminal charges to contractors and workers
- Suspension of the project
- Delay of project implementation
- Termination of the whole project in extreme cases

6.0 PREVENTING GBV DURING AND AFTER CIVIL WORKS

All measures should be made to ensure zero cases of any form of Gender based violence related to the project during and after civil works to the community and contractors' workers. The preventive measures include but not limited to the following;

j) All contractors, workers, suppliers, representativity, agents and other categories including site visitors to sign and comply with the GBV Behaviour Protocol (Appendix II)
k) Restrain contractor workers from interacting with community during civil works
l) Sensitize community and workers on Gender Based Violence
m) Involving the Uganda Police, Probation Officers and Local councils in vetting contractor workers before starting their employments to track criminal record including record of GBV
n) Engaging other Gender advocates partners like Non-Government Organizations to continuously monitor, detect, report, refer and follow up cases of violence against children
o) Putting heavy penalties including termination of contract and litigation of contractors and workers who commit GBV
p) Providing gender sensitive facilities like separate toilets and washrooms for both men and women

6.0 MANAGEMENT OF GBV CASES

All Contractors, Workers, Suppliers, Representatives and other Partners including site Visitors MUST;

- Say no to GBV; It is important to express clear and firm refusal as of the first signs of sexual harassment, if possible, and to underscore the reprehensible and unlawful nature of such acts. You may also remind the offender that the company has a sexual harassment monitoring unit.
- Protect themselves against taking part in GBV; To the extent possible, avoid one-on-one encounters with the person harassing you. Do not keep the situation to yourself: talk to a third party, colleague, classmate, professor, etc.
- Contact the immediate supervisor; Immediately alert the immediate LC, supervisor, roads committee member, Police, or Sub County.
- Show solidarity with the victim, inform him or her of the steps to be taken and refer him or her to the LC, supervisor, roads committee member, Police, or Sub County.
- Provide a written account of the events, specifying the location, date and circumstances, as well as the identity of any other people present.

8.0 REPORTING INAPROPRIATE BEHAVIOUR

Reporting sexual harassment helps put an end to offensive behaviour and encourages other victims to speak up. The contractor should always guide and advice the community, workers and agents to report any suspected case of GBV.

Perpetrators of sexual harassment may be subject to disciplinary action and criminal charges. Disciplinary and criminal procedures are independent of one another and may be undertaken simultaneously.

In a formal reporting, the following procedure will be undertaken using the report form (**appendix I**);

1. Getting the details of the Victim of GBV
2. Documenting the details of the Case
3. Preparing witnesses to engage other Legal Actors like the Police
4. Establishing the appropriate procedure including the need to for medical examination of the victim and the perpetuator
5. Producing a comprehensive report to enable duty bearers assess and take appropriate actions
6. Submitting the report to Duty Bearers like Uganda Police, State Attorneys and Courts
7. Follow up of GBV Cases and victims to ensure appropriate services are accessed by the Victim

Appendix I: ***Reporting Form for Gender Based Violence Cases***

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project (ARSDP)

REPORTING FORM FOR GENDER BASED VIOLENCE CASES
(To be printed in A3 booklet with percolated papers and duplicates)
(To be used by Road Committees, Grievance Committees, Schools, Local Councils, NGOs and CBOs and other designated Entities on Gender Based Violence during Civil Works)

Part 1: Details of the Reporter

Name of the Person reporting the case	Address: Location:	Date of reporting the case:
Designation and relationship with the GBV victim and survivor	Contact details; Tel. No (Landline): Tel. No (Mobile): Email:	Time of Reporting:

Part 11: GBV victim information

S/N	Indicators	Details captured
22.	Name of the GBV Victim and her or his photo (to be coded for future investigation and ensure confidentiality	
23.	Sex	
24.	Date of birth and Age	
25.	Residence	
26.	Contacts- telephone	
27.	Reference number	
28.	Nature/type of the alleged act of violence:	
29.	Location: where the incident took place	

30.	Number of times the Victim has encountered such a form of violence	
31.	Other associated forms of violence the victim has encountered by the alleged perpetrator	
32.	Relationship of the victim with the alleged perpetrator	
33.	Impact of the act of violence on the victim –state of the victim i.e. physical, mental, feelings	
34.	Date or time frame of the act of violence	
35.	Witnesses (if any) and their observations and their willingness to appear in case of further investigations and their telephone contacts	
36.	Status of reporting (if there are previous efforts of reporting the case and the person/officer reported to	
37.	Measures or actions taken	
38.	Outcomes of the measures if any	
39.	Recommended actions and support services for the victim	
40.	Witnesses Name: Address: Contact number:	Describe the event as witnessed:
41.	Any other information found necessary to support the case- photographic or recorded evidence	
42.	Form compiled by: Name: ----------Signature: ---------- -	Position---------- Date----------

Part III: Details of the Alleged perpetuator

Notes	Attach all the necessary supporting information or documents and remember to retain a copy for follow-up and complete the referral data base form.

S/N	Indicators	Details captured

1	Name of the alleged perpetrator (attach a photo) if available and willing to provide the information required	
2	Sex	
3	Age if known	
4	Residence	
5	Marital status	
6	Contacts- telephone	
11	Consent or non-consent of the perpetrator on committing the act	
12	Previous incidents of Gender Based violence committed by the alleged perpetrator	
13	Measures taken by the duty bearers and other stakeholders against the perpetrator	
14	Outcomes of the measures if any	
15	Recommended actions against the perpetrator	
16	Any other information found necessary	
17	Form compiled by: Name: ---------- Signature: ---------- Position: ---------- Date: ----------	Contact details: Tel: ----------Email: ----------

Appendix II*: Gender Based Violence Behaviour Protocol for Contractors, Workers, Suppliers, Representatives and any Partners including Site Visitors*

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT
Albertine Region Sustainable Development Project (ARSDP)

Gender Based Violence Behaviour Protocol for Contractors, Workers, Suppliers, Representatives and any Partners including Site Visitors

Responsibility of Contractors' Employees

1. Employee must report Potential Acts of Gender-based Violence in the event Employees suspect or witness acts of Gender-based Violence in the workplace or suspect or witness Gender-based Violence being perpetrated either against an Employee or by an Employee. The employees should immediately alert to appropriate supervisor.
2. The employer shall not retaliate against, terminate or discipline any Employee for reporting good faith concerns about workplace-related incidents of Gender-Based Violence in view of the GBV Policy.
3. Any Employee who believes he or she has been subjected to adverse action for making a report related to GBV should contact the District Labour Office for appropriate action.
4. The telephone contacts of the Supervisors, Sub County Chiefs, Community Development Officers, and the Labour Officers shall be made available to all Workers.
5. Employees shall be prohibited from using any workplace resources, such as work time, vehicles, phones, e-mail, computers, fax machines or other means to threaten, harass, intimidate, embarrass or otherwise harm another person.
6. An employee who is subject to a final court order, or who has been convicted in a criminal or civil action as a result of a threat or act of Gender-based Violence, must disclose the existence of the final court order to his or her supervisor or other appropriate person within the Organization. Failure to disclose the existence of such a final court order in these circumstances may result in disciplinary action, up to and including termination.
7. If an employee does not disclose and the employer discovers that the employee may have committed an act of Gender Based violence, the employer shall take the matter to appropriate authority like Uganda Police for full investigation and shall take disciplinary action, up to and including termination, against any Employee who threatens to commit, who commits or has committed incidents of Gender-based Violence.

Responsibility of the Employers/ Contractors

8. The employer shall conduct regular and mandatory awareness programs for all Employees to raise awareness of the ways Gender-based Violence may impact the workplace, for all Employees to take all reasonable measures to create a harmonious working environment, which is free from

intimidation, hostility, offense and any form of violence, and to encourage Victims to seek assistance in negotiating abuse through Safety Planning.

9. Training will include information on the physical, social and cultural realities that may affect Victims of Gender-based Violence; the ways in which such violence impacts the workplace, including the potential impact on worker productivity and safety risks; and the steps that all Employees can take to eliminate the risk of violence and to support victims.
10. The Contractors' Sociologist shall ensure that all Employees, sub-contractors, suppliers, agents and visitors are provided with a copy of this Policy and shall ensure that evidence in form of acknowledgements are properly kept for disclosure whenever necessary.
11. The Contractor shall promptly inform the appropriate designated authorities that include the Local Councils, Uganda Police, Sub County Community Development Officer, Ministry of Lands, Housing and Urban Development among others about investigations into cases of Gender-based Violence, and of the action taken as a result of such investigations.
12. Failure to take action may be considered a breach of duty and result in administrative action and/or disciplinary proceedings including penalties, contract suspension and / or termination.

Emergency Contact

13. In an event of imminent threat of Gender-based Violence, Employees should contact _____.

The LC Chairperson: _____
The Sub County CDO: _____
The District CDO/ Gender Focal Person: _____
The Uganda Police Post/ Station: _____
The Social Development Specialist (ARSDP): _____

DECLARATION OF ACKNOWLEDGEMENT AND COMMITMENT TO ABIDE BY THE GENDER BASED VIOLENCE PROTOCAL

I have read and understood, and I undertake to adhere to Gender Based Violence Protocols under ARSDP.

Name: _____
Signature: _____
Title: _____
Organization: _____
Telephone Contact: _____
Physical Address: _____
Date: _____

WITNESSED BY

Name: _____
Signature: _____
Title: _____
Organization: _____
Telephone Contact: _____
Physical Address: _____
Date: _____

APPENDIX 27: CULVERTS SCHEDULE FOR BATCH 1 ROADS BULIISA DISTRICT

Culvert schedule: Buliisa – Bugana

S/n	Location (Chainage)	Type of Culvert (Concrete, Metal)	Proposed New / Additional Culverts			APPX. COORD.		Remarks
			Size-Diam (mm)	No. of Barrels	Total Length (m)	NORTH.	EAST.	
1	0+020	Concrete	600	1	10	234249	323854	Crossing culvert at Wagalia access road.
2	0+350	Concrete	600	1	8	234164	324171	Crossing culvert.
3	1+000	Concrete	600	1	7	233980	324790	Crossing culvert.
4	1+350	Concrete	600	1	7	233865	325120	Crossing culvert.
5	2+100	Metal	600			233528	325784	Desilt and retain at tullow gate
6	2+150	Metal	600			233501	325826	Desilt and retain at tullow gate
7	3+150	Concrete	600	1	10	233064	326715	Crossing culvert at kisiabi - kijangi road junction.
8	3+250	Concrete	600	1	7	233007	326798	Crossing culvert.
9	4+300	Concrete	600	1	7	232393	327646	Crossing culvert.
10	4+400	Concrete	600	1	7	232343	327733	Crossing culvert.
11	5+300	Concrete	1200	3	27	232030	328569	Crossing culvert at lowpoint water logging.
12	6+100	Concrete	900	3	27	231652	329269	Crossing culvert at lowpoint water logging.
13	6+400	Concrete	600	1	7	231540	329547	Crossing culvert.
14	7+100	Concrete	600	1	7	231234	330172	Crossing culvert.
15	7+300	Concrete	600	1	7	231141	330347	Crossing culvert.
16	7+500	Concrete	600	1	7	231059	330530	Crossing culvert.
17	9+950	Concrete	1200	4	32	229650	332486	Crossing culvert.
				22	177			

Culverts schedule: Kisiabi- Kabolwa

S/n	Location (Chainage)	Type of Culvert (Concrete, Metal)	Proposed New / Additional Culverts			APPX. COORD.		Remarks
			Size-Diam (mm)	No. of Barrels	Total Length (m)	NORTH.	EAST.	
1	0+000	Concrete	600	1	6	231159.3	324172	Crossing culvert at start of road
2	1+000	Concrete	900	1	7	230310.4	323657	Crossing culvert.
3	1+500	Concrete	900	2	14	229850.6	323494	Crossing culvert.
4	1+800	Concrete	900	2	14	229589.7	323347	Crossing culvert.
5	2+400	Concrete	600	1	6	229019.7	323202	Crossing culvert.
6	3+600	Concrete	600	1	6	227859.8	323394	Crossing culvert.
7	4+100	Concrete	600	1	6	227418.4	323617	Crossing culvert.
8	4+150	Concrete	600	1	6	227375	323642	Access culvert Karakaba LHS
9	4+400	Concrete	900	1	7	227135.4	323709	Replace with culvert 900 dia
10	4+750	Concrete	900	2	14	226816.5	323841	Replace with culvert 900 dia double
11	6+000	Concrete	600	1	6	225598.9	324056	Crossing culvert.
12	6+300	Concrete	900	1	7	225303.6	324095	Replace with culvert 600 dia
13	6+320	Concrete	600	1	7	225284.8	324102	Crossing culvert.
14	6+650	Concrete	600	1	6	224982.1	324229	Crossing culvert.
15	6+850	Concrete	600	1	6	224789.7	324281	Crossing culvert.
16	7+200	Concrete	900	2	14	224451.9	324371	Crossing culvert.
17	7+900	Concrete	900	1	7	223762.3	324406	Crossing culvert.
18	8+200	Concrete	900	2	7	223493.2	324282	Replace with culvert 900 dia
19	8+600	Concrete	600	1	6	223116.3	324365	Crossing culvert at Ngazi-Kabolwa road junction.
20	9+200	Concrete	600	1	6	222738.7	323963	Crossing culvert.
			Total	25	158			

Culverts Schedule: Ngwedo - Ndandamire - Bikongoro

S/n	Location (Chainage)	Type of Culvert (Concrete, Metal)	Proposed New / Additional Culverts			APPX. COORD.		Remarks
			Size-Diam (mm)	No. of Barrels	Total Length (m)	NORTH.	EAST.	
1	0+700	Concrete	600	1	6	237566	330655	Crossing culvert.
2	1+350	Concrete	600	1	6	237417	330028	Crossing culvert.
3	1+450	Concrete	600	1	6	237403	329930	Crossing culvert.
4	1+600	Concrete	600	1	6	237378	329783	Crossing culvert.
5	1+900	Concrete	600	1	6	237292	329496	Crossing culvert.
6	2+100	Concrete	600	1	6	237282	329303	Crossing culvert.
7	2+300	Concrete	600	1	6	237296	329104	Replace with 600 dia
8	3+100	Concrete	600	1	6	237336	328319	Crossing culvert.
9	5+800	Concrete	900	1	7	237489	325857	Crossing culvert.
10	6+200	Concrete	900	1	7	237751	325558	Crossing culvert.
11	6+500	Concrete	900	2	14	237910	325305	Crossing culvert.
12	7+400	Concrete	900	2	14	238424	324587	Replace with multiple 900mm dia pipes
13	7+500	Concrete	900	4	28	238470	324498	Crossing culverts, actual location/s to be confirmed on ground
14	9+450	Concrete	900	1	7	239554	322890	Crossing culvert.
15	9+700	Concrete	900	1	7	239640	322656	Replace with 900mm dia
16	10+600	Concrete	600	1	6	239861	321812	Crossing culvert.
17	10+700	Concrete	600	1	6	239849.404	321712.7251	Crossing culvert.
				22	144			