Republic of Uganda

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

Social Impact Assessment

for Proposed Isimba HPP (Dam and Reservoir)

Prepared for:

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT
Amber House,
Plot29/33 Kampala, Uganda
P.O. Box 7270
Tel: + 256 414 349276, 0414-597801

By:

AWE Environmental Engineers
EIA & Audits Partnership of
AIR WATER EARTH (AWE) LTD
Environmental, Civil Engineers & Project Management Consultants
M1, 27 Binayomba Road, Bugolobi
PO Box 22428, Kampala
Office Tel. +256-41-4268466
E: mail@awe-engineers.com
W: www.awe-engineers.com

As sub-consultant for:

KAGGA& PARTNERS LTD
Consulting Engineers
2 Bandali Close Bugolobi
PO Box 6583, Kampala
Uganda
T:+256 414 220279 / 256 414 223692
E: mail@kaggapartners.com
W: www.kaggapartners.com

On behalf of:

FICHTNER GmbH & Co. KG
Sarweystrasse 3
70191 Stuttgart, Germany
T: +49 (0)711 89 95 - 0
E: info@fichtner.de
W: www. fichtner.de

FICHTNER

And:

NORPLAN
NedreSkøyenvei 2
0276 Oslo, Norway
T: +47 21 58 50 00
F: +47 21 58 50 01
E: norplan@norplan.com

NORPLAN

April, 2014

Document Control

Client: Ministry of Energy and Mineral Development, MEMD			**Project No:** SIA/218	
Report Title: Social Impact Assessment Report for Isimba Hydro Power Dam.			**Date:** Sep 2013 **Report. No.:** MEMD/2011/2	
Revision	**Description**	**Originator**	**Reviewed**	**Date**
		PK	FM, OD, LK,CT	September 2013
Preparation of this report has been undertaken within agreed terms of reference using all reasonable skill and care. The consultant accepts no responsibility or legal liability arising from unauthorized use by third parties of data or professional opinions herein contained.			Distribution ■ Official ☐ Public ☐ Confidential	

Consultants

LEAD TEAM	Role
Pamela Tashobya: BA (Env Mgt), MSc (Norway),	Team Leader /Socio-Development Specialist
Faith Mugerwa: BA, MA (MAK)	Sociologist
Ritah Nabaggala: BEnvMgt (MAK)	Community mobilisation/ primary data collection
David Oyen: BEnvEng&Mgt	Primary data collection
Eng. Lammeck KAJUBI: BScEng (1.1 Hons) MAK, MEngSc (Australia), REng.	Project Manager
Dr.Herbert M. Kalibbala: BscEng, MScEng, PhD (Sweden)	Civil/Infrastructure Engineer

SUPPORT TEAM	
Lamek Seryazi	Field Sociologist
Richard Kalyango	Community mobiliser

Contents

List of Tables

List of Figures

Acronyms, units and definitions

CAO:	Chief Administrative Officer
CDM:	Clean development mechanism
CER:	Certified carbon emission reduction
CFR:	Central Forest Reserve
CO_2:	Carbondioxide
CSR:	Coperate Social Responsibility
DIA:	Direct impact area (also see INDIA)
DWD:	Directorate of Water Development
DDP:	District Development Plan
EA:	Environmental Assessment
EH&S:	Environmental, Health and Safety
EIS:	Environmental Impact Statement (or ―EIA report‖)
ERA:	Electricity Regulatory Authority
ESIA:	Environmental & Social Impact Assessment
FSL:	Full Supply Level
GHG:	Greenhouse gas
GIS:	Geographical information system
GoU:	Government of Uganda
GWP:	Global warming potential
HC:	Health center (e.g. HC I, II, III, IV)
HIV/AIDs:	Human immunodeficiency virus infection
HPP:	Hydropower Project
IFAD:	International Fund for Agricultural Development
INDIA:	Indirect impact area (also see DIA)
LC:	Local Council (used for various tiers of local councils e.g. LC 1, 2, 3, 4 or 5 or I, II, III, IV and V)
LGDP:	Local Government Development Program
MAAIF:	Ministry of Agriculture, Animal Industry and Fisheries
Masl:	Meters above sea level
MEMD:	Ministry of Energy and Mineral Development
MoLG:	Ministry of Local Government
NAFIRRI:	National Fisheries Resources Research Institute (formerly known as Fisheries Research Institute)
NBI:	Nile basin Initiative
NEMA:	National Environment Management Authority
NDP:	National Development Plan (NDP)
NFA:	National Forestry Authority
NGO:	Non-Governmental Organization
NOx:	Oxides of nitrogen
NWSC:	National Water & Sewerage Corporation
OECD:	Organization of Economic Cooperation and Development
OP:	Operational Procedure
PAP:	Project Affected Person
PM:	Particulate matter (e.g. PM_{10}, PM_5, $PM_{2.5}$)
PPP:	Public-Private Partnership
RAP:	Resettlement Action Plan
REA:	Rural Electrification Agency
RTIs:	Respiratory Tract Infections
SIA:	Social Impact Assessment
RoW:	Right of Way
SOx:	oxides of sulphur
STD:	Sexually transmitted diseases
TL:	Transmission Line
TOR:	Terms of Reference
TSP:	Total Suspended Particulates
UPE:	Universal Primary Education
UBOS:	Uganda Bureau of Statistics

UEGCL:	Uganda Electricity Generation Company
UETCL:	Uganda Electricity Transmission Company
UPE:	Universal Primary Education
UTIs:	Urinary Tract Infections
WB:	World Bank
WCD:	World Commission on Dams
WWR:	White Water Rafting

Units

GJ:	Giga joule
Ha:	Hectare
MW:	Megawatt
MWh:	Megawatt - hour

Executive Summary

01 INTRODUCTION

The period between 2003 and 2007 is remarkable in the history of Uganda's electricity sector because of a prolonged drought which affected operations of the Owen Falls Dam, then the country's main source of electricity. Impaired hydrology led to substantial decline in electricity generation resulting into a supply deficit of up to 210 MW, causing 24-hour load shedding. Acute electricity supply shortage negatively impacted the gross domestic product (GDP), dropping at the rate of 1.5% per annum. In spite of the decline in generation, demand for electricity continued to grow, widening the gap and peak demand reached 380MW.

The energy ministry (MEMD) in 2006 prepared a plan to meet the shortfall in electricity supply in the short, medium and long terms. The broad objective was not only to provide adequate and reliable power supply, but to also anticipate new electricity demand ahead instead of the old approach of chasing demand forecasts. The short-term measures involved procurement of thermal generation to provide temporary relief. About 150 MW of additional thermal power plants were installed to provide relief to the consumers at Lugogo, Mutundwe and Kiira sub-stations, the Government also procured the 50 MW Namanve Jacobsen Heavy Fuel thermal plant. However, the stop-gap measures were at a cost. Power became expensive, forcing the Government to subsidise up to $9.5 million every month despite increase in the end-user tariffs. The introduction of thermal power generation in the energy mix was combined with aggressive energy loss reduction strategy and an energy efficiency/ demand side management. To improve energy efficiency, the 800,000 energy-saving bulbs were procured at a cost of $1.2 million and distributed freely to households and about 30 MW were saved under this demand-side intervention. The energy ministry also carried out energy audits in various industries, commercial buildings and institutions to improve their energy management practices.

The medium-term strategy involved the development of the 250 MW Bujagali Hydropower Project on River Nile. Construction work of this project started in May 2007, and the plant was fully commissioned in July 2012. The Bujagali project doubled the electricity supply, reducing load-shedding and replacing expensive thermal power generation. The plant was commissioned unit-by-unit basis in response to energy ministry's strategic decision to replace the expensive thermal power generation at the earliest date and minimize load shedding. The other mediumterm measure was to promote construction of small hydropower plants around the country. A number of small hydro power project have already been completed and commissioned.

In September 2012, Nyagak Hydropower Plant of capacity 3.5 MW was commissioned, and this supplies the off-grid West Nile region. Other plants commissioned recently and delivering power to the national grid are

- 18 MW Mpanga small hydro power station (Commissioned in 2011)
- 13 MW Bugoye small hydropower station (Commissioned in 2009)
- 6.5 MW Ishasha mini-hydropower station (Commissioned in 2011)
- 10 MW Mubuku III mini-hydro station(Commissioned in 2008)
- 9 MW Buseruka hydropower plant renamed Kabalega Hydropower Plant (Commissioned in January 2013)

It is estimated that there are over 50 small hydropower sites around the country, which can generate a total of 180 MW to supplement bigger projects on the River Nile.

Uganda Government is now focused on construction of the 180 MW Isimba Hydro power project and 600 MW Karuma Hydro power project which will be a major addition to the national hydropower pool.

02 PROJECT BACKGROUND

Enactment of the Electricity Act, 1999 paved way for liberalisation of Uganda_s energy sector, allowing the establishment and operations of independent power producers. This Act liberalized the power sector breaking up Uganda Electricity Board that had monopoly for power generation, transmission and distribution, into three companies responsible for generation (UEGCL), transmission (UETCL) and distribution (UEDCL) of electric power in Uganda. UETCL has the responsibility of transmission of high voltage power, bulk purchase of power and bulk sale to independent power distributors. UEDCL owns the electricity supply infrastructure operating at 33 kV and below. Its assets were leased to UMEME in 2005 under a 20-year concession. UETCL owns and operates the grid connected electricity supply infrastructure operating above 33 kV. It is the only company responsible for buying power in bulk from generators and selling it to distribution companies. UEGCL owns the Kiira and Nalubaale hydropower stations. Its generation assets were leased to Eskom Uganda Limited in April 2003 under a concession agreement.

Energy is one of the key sectors in Uganda_s economy. On one side the sector provides a major contribution to treasury resources (fuel taxes, VAT on electricity, levy on transmission bulk purchases of electricity, license fees and royalties) and foreign exchange earnings (power exports). On the other side significant public investment has been injected into the sector, particularly in the area of electricity supply. Following liberalization, the power sub sector is now attracting the largest private sector investments in the country. MEMD is responsible for policy formulation, implementation and monitoring the energy sector.

Uganda_s access to grid electricity is currently less than 15% with majority of the population depending on traditional biomass energy. Uganda_s per capita energy consumption of 0.3 tonnes of oil equivalent (TOE) or 12.72 GJ, is among the lowest in the World. Over 90% of energy consumption is biomass, mostly wood and charcoal, which is not environmentally sustainable.

Isimba Power Station is to be constructed on the Victoria Nile, downstream of Bujagali Power Station. The contract for feasibility studies and design was awarded to a consortium of engineering firms FICHTNER and NORPLAN in association with KAGGA & PARTNERS a Ugandan engineering consulting practice. The latter is responsible for managing the preparation of EIA, SIA and resettlement plan of the project.

Power to be generated by Isimba hydropower dam would considerably increase the nation_s installed capacity of a renewable and cheaper energy supply. Without this project, 180 MW of electrical supply would be forfeited on the national grid. This would mean continued power scarcity and increased load shedding when supply is outstripped by demand. Isimba HPP is in line with Uganda Government_s continued pursuit for sufficient power supply to match present and foreseeable future national demand.

According to Uganda_s National Environment Act Cap 153, Section 10(a, b and c, i.e. electrical generation stations, transmission lines and substations respectively), the proposed project is categorized among —Third Schedule‖ developments for which EIA is mandatory.

03 OBJECTIVES

The Objectives of the SIA were to:

- Conduct social baseline in the project area.
- Conduct consultations with relevant stakeholders, including potentially affected persons, to obtain their views and suggestions regarding the environmental and social impacts of the proposed project.
- Identify potential negative and positive social impacts of the Project and propose mitigation measures.
- Prepare an SIA report incorporating results of social analysis.

04 PROJECT DESCRIPTION

Isimba HPP will have a generation capacity of 180 MW. Due to a relatively low water head available, the power station will have its powerhouse structure embedded in the overall water retaining structure. This offers the most convenient and cost-effective option. The power station will comprise Kaplan turbines which provide for easier maintenance since similar units are installed at Bujagali HPP and Nalubaale HPP (formerly Owen Falls Dam). A rockfill dam with central clay core was selected for power station‘s structure. This choice was based on abundant availability of good rock material and clay in the vicinity of project site.

05 SOCIAL-ECONOMIC BASELINE

This section presents the socio-economic assessment, and current project socio-economic baseline situation formed through a combination of primary survey data, secondary data and stakeholder consultation of districts in Kayunga, Kamuli and Jinja.

The project areas are under administrative jurisdiction of these respective decentralized local governments where each local government functions with autonomy to formulate development objectives and budgets in line with polices of the Central Government. This section briefly outlines the administrative structure of Uganda, particularly those administrative levels relevant to this Social Impact Assessment.

In the project area, the River Nile forms the boundary between Kayunga District on the left bank, Kamuli and a small part of Jinja District on the left bank. Within Kayunga District the area directly affected by the proposed Isimba dam project lies within Busaana Nazigo and Kangulumira Sub-Counties within which lie 13 villages. Within Kamuli District, the area directly affected lies in Kisozi sub-county within which lie 12 villages. Jinja district having the least number of PAPS has two (2) villages affected in Butagaya sub-county. Administrative areas are presented in table below.

Table 0-1: Project Area by District, Sub-county, Parish and Village (LC I)

District	Counties	Sub-Counties	Parish	Villages
Kayunga	Ntenjeru	Busaana	Nampanyi	Nampanyi, Kireku-Nampanyi, Nakandwa
			Lusenke	Kireku-Lusenke
		Nazigo	Kati-Kanyonyi	Kiteredde, Nakatooke,and Budooda
			Kirindi	Kiwuba, Nakakonge, Kirindi, Damba
			Natteta	Wabirongo
		Kangulumira	Kangulumira	Kitambuza
Kamuli	Buzaya	Kisozi	Nankandulo	Mutumu-Nakaato, Bumegere, Namalumba, Buluba, Nabukiidi, Bupiina
			Namaganda	Isimba-Nabukiddi Nababirye-Bukasa, Buzimbye, Bubwege, and Bulamuka
			Kiyunga	Bulangira Busoke
Jinja	Kagoma	Butagaya	Nakakulwe	Buwala B, and Lumuli A

06 SOCIAL-ECONOMIC CHARACTERISTICS OF PROJECT AREA

Population

Overall, the total population of all villages affected by the proposed Isimba dam is 2,076 people of which 968 people are in Kayunga District while 1,100 and 8 people are in Kamuli and Jinja Districts respectively. Based on the expected potential social impacts, their extent and significance, proposed Isimba 180MW dam is classified under a —Category All project. This is because Hydro Power Plant will affect property owners by way of land take, loss of structures, loss of crops, economic displacement in some cases and impact on community resources such as boreholes, schools and places of worship.

Sex of Respondents

From the field survey, it is evident that a large percentage of the household heads interviewed were male (80.1%) compared to female (19.9%) headed households. Further analysis shows that in the entire project affected districts male respondents were the majority compared to the female. This is because they own the land compared to the women. Kamuli district registered (43.7%), Kayunga (36.2%), and (0.1%) in Jinja district. These were far greater in number in comparison to the female respondents who registered (13.6%) in Kamuli, (6.3%) Kayunga and 0.1% in Jinja district. Table below shows the break down.

Marital Status

With regard to marital status, most project affected persons were married (84.9%), followed by widowed or widowers (8.7%) and single with (4.9%) and only (1.5%) were divorced. Further analysis of the marital status at district level confirmed that the majority of respondents in Kamuli (81.2%), Kayunga (80.9%) and Jinja (75%) were married. This was followed by the widowed who registered (8.4%) in Kamuli, (9.3%) in Kayunga and (25%) in Jinja. In the entire project affected districts the widowed respondents were mainly female headed households compared to the male. Majority of the females who were widowed had lost their spouses as a result of drowning in the river while fishing and some to diseases such as malaria.

Ethnicity

Ethnicity is one of the key considerations to be taken into account while designing social mitigation strategies. Kamuli district comprises of several ethnic groups due to migration trends. However the Basoga are the majority tribe. The other tribes include Iteso, Bakenyi, Banyoro and Baruli among others. There are also non-Ugandans from different countries of the East African Region and other African Countries namely - Kenya, Tanzania, Rwanda and Burundi. The predominantly language spoken in Kamuli District is Lusoga, with some Luganda and English. Within the project affected villages of Kamuli district, the dominant ethnic group is Basoga (48.3%), followed by itestos, Japadhola and Baganda.

Education

There are only primary and nursery schools located within the project areas. The secondary schools identified were very far away from the project area except for Kamuli district. The nearest secondary schools were more than 5 kms at the left bank (Kayunga district) and less than 2 kms at right bank (Kamuli and Jinja district). During the field survey, only five primary schools were identified as being close to the project area in Kayunga district while 16 schools were in Kamuli. In Jinja district respondents in Lumuli A and Buwaala village reported using schools located in Kamuli since the distances were shorter. In Kayunga district the schools identified include:

- Nakakandwa Church of Uganda Primary School,

- Nakakandwa RC Primary School,
- Nakatooke Primary School,
- Kirindi Primary School and
- Nazigo Demonstration School.

While in Kamuli district the schools identified within the project are include:

- Kisozi S.D.A Primary School
- Isimba Primary School
- Kisozi Primary School
- Nile Primary School
- Lwanyama Primary School
- Bugolo Primary School
- Izanyiro Primary School
- Kiyunga Primary School
- Nakandulo Church of Uganda Primary School ▪

Matuumu Bumegere Primary School

- Nankandulo Moslem Primary School
- Matuumu C/U Primary School
- Bulamuka Primary School
- Matuumu Catholic Primary School

The secondary schools identified were only two; Buzaaya Secondary School and Matuumu Secondary School.

Health

The entire project affected districts although health care services are not at their best; they have access to health facilities at their sub-counties. From the field survey, it is evident that respondents of the three affected Districts had access to health care facilities; however there were problems such as an inadequate supply of drugs, very few health personnel, lack of modern facilities for proper diagnosis and the distances to the health centres being far away from their homes. Primary data shows that in Kamuli district, there are two health centers that the PAPs access when seeking health care services (Nankandulo HC IV and Kiyunga HC II) whereas in Jinja district, people access Lumili HC II. Busaana HC III located in Busaana Sub-County and Bukamba HC II in Nazigo Sub-county in Kayunga district, are the two Health Centers that provide health care services in the project affected areas.

Livelihoods and Occupation

Subsistence farming is the principal source of livelihood and majorly within the areas surveyed. Respondents reported growing a variety of crops ranging from food crops like maize, rice, sweet potatoes, beans, cassava, ground nuts and others and cash crops like coffee, sugarcane, pineapples and bananas. Given the mixed nature of agriculture in the project area, majority of the households were found to be growing different kinds of crops and also rearing animals in some cases. Maize was the most highly grown crop among household (26%), followed by sweet potatoes (21%), cassava 20%), beans (18%), Rice (3%), sugarcane (7%) and others (5%). The above mentioned crops doubled as both cash and food crops.

Respondents revealed that income from agricultural produce is used for procurement of domestic requirements such as sugar, salt, and soap. More to this the income earned helps to finance education for their children as well as access to healthcare services.

More to this respondents reported planting a variety of trees on their land. Trees are planted for a wide range of reasons including: to demarcate plots; provide shade and windbreaks; to provide a source of fuel and building materials; to produce fruit for sale and household consumption; to provide fodder; for herbal or traditional medicine,

and, to improve soil moisture and fertility. The main fruit trees are jackfruit, avocado, mango, oranges and pawpaw. Other trees include muvule (Chlorophora excelsea), pines, mugavu, musambya (Markhamia platycalyx or Macadanua lutea), Eucalyptus spp., musisi (Aesopsis emini) and Leucaena spp.

Livestock farming (**Figure 6-13**) is also practiced within the project area but done on a small scale with most households not keeping more than 5 cows, goats and poultry except for one individual in Nakandwa village that rears cows, goats, pigs and poultry on a medium scale. The most common livestock are cows, goats, pigs and poultry. According to the respondents, very little income is got from selling livestock and this is mainly because they are reared at a small scale.

Fishing

Fishing was more done on the left bank, in seven villages; Nampanyi, Nakakandwa, Kitterede, Naluganga, Nakatooke, Kirindi and Natogonya. Fishermen per village ranged between 9 and 25, Nampanyi villagehaving the highest number.

The fishing gear used include; Gillnets, castnet (Ponyoka), longline (Mugonjo) and line and hook (Ddobo). According to the fishermen, gillnets —4ll and longline are usually laid in the evening and left overnight because fish is mostly caught at night. Themajor types of fish caught by fishermen included; Tilapia (Ngege) which weighbetween0.3 to 1.25 kg, Nile perch/ Mputa (0.6 to 2.5 kg), Barbus/ Kisinja (0.4 to 1.5 kg), Bagrus/ Semutundu (0.25 to 0.8 kg) and catfish/Male (0.3 to 0.8 kg).

During the focus group discussion with fishermen, they reported that fish caught is immediately solid at landing sites and not enough to meet local demand, therefore no storage, processing and marketing facilities required. Fish sales range between Ug shs 45,000 and 100,000 per day.

Sand mining and Stone quarrying

Sand mining was also identified a source of livelihood in Kiwuba village (Kayunga district) and Bulangira - Bukose in (Kamuli district). During field survey, some respondents especially those who are into mining business reported that it is a profitable business which has attracted both men and youth who have opted dropping out of school. On the banks of river Nile both in Busaana and Kisozi Sub-County, in Kayunga and Kamuli district respectively, children usually descend in the middle of the waters, scoop the sand which they transport on the boats to the river banks from where it's sold at between Shs150, 000 (USD 57) and Shs180, 000 (USD 69) depending on the size of the lorry truck to be loaded. Most of the sand mined is sold to contractors and individuals who use it for construction works.

Infrastructure

Access to social services and infrastructure are some of the indicators of wealth, poverty and vulnerability. Access to services measured include, water and sanitation, roads and energy sources. These are explained below.

- ***Water and sanitation:***

  The common source of domestic water was the river (73.5%), followed by communal boreholes (21.7%). Some respondents who live near trading centres reported using tap water, protected wells and springs. Kayunga district had more bore holes (98.2%) compared to Kamuli district (51.7%). In Kamuli district, shallow wells were commonly used however, since the distances to the bore holes were far some people preferred going to the River Nile to get water for domestic use. According to women interviewed during focus group discussions, majority revealed using water from the river for bathing, drinking, cooking food and washing clothes. During the survey is was observed that some men bathed at the rivers whereas women carried water on their heads from the rivers to their homes for domestic use such for their husbands to bath, cooking, bathing small children and

washing utensils. Many children also go to the rivers to collect water and to swim/bath. Most women wash cloths from the rivers to reduce water collecting trips they have to. Some even wash utensils from there.

- **Energy:**

Primary data from field survey shows that wood fuel is the main source of cooking in the entire project affected area standing at 94.7%. Further analysis shows that Kerosene (94.8%) was the main source of fuel for lighting for majority of respondents in the project area.

- **Transportation and road access to the site**

At the right side of the Nile River there are almost no paved roads. Main access road toward the site is Jinja Kamuli road. Already few kilometers north of Jinja there is no pavement anymore on this road. Most of the access roads toward the site on the right side of Nile River are narrow murrum feeder/access roads, where some of them are only for pedestrians.

On the left side of the Nile River the road Jinja - Kayunga is paved in the full length. This is a two way road with approximate width of 6 meter. Nevertheless, there is still more than 10 km of unpaved feeder/access roads from Kayunga to the site. As on the right side, local access roads toward the site are narrow murrum feeder/access roads.

Due to the existence of the paved road Jinja - Kayunga and the existence of the direct road connection Kampala - Kayunga the accessibility to the site is easier on the left side of the Nile River. Nevertheless since there are hardly any local access roads to the site, implementation of the project will require construction of new roads and tracks to provide the access to the dam site, as well as to the temporary facilities such as cofferdams, quarries, batching and crushing plants, stockpiles, workshops and others.

Land ownership

Land ownership in the project Districts vary. In Kayunga, Kamuli and Jinja districts, majority of land is customary (was formerly public or government owned) and Private Mailo land. A majority of residents do not have title deeds for the land. The people only own ―BibanjasII and usually inherit land from parents and grandparents. A very small number of people are private mailo owners with title deeds.

Vulnerable groups

The vulnerable groups in the project area are elderly widowed, child headed households and handicapped. People living with HIV/AIDS also qualify to be categorized as a vulnerable group due to the stigma associated with the disease and discrimination, but due to lack of availability of data on them, they have not been included in this study. In the project affected districts a number vulnerable people were identified except for Jinja district. Section 6.2.2.17 shows the vulnerable groups identified.

Cultural Property

Cultural resources to be affected were noted to be burial grounds of relocated households and shrines of traditional worship. Field surveys show that a total of 8 traditional religion sacred sites (shrines) will be affected by the proposed Isimba dam where 3 are located at the left bank (Kayunga District) while 5 are at the right bank (Kamuli District) and non in Jinja district. More to this a total of 668 graves will be affected by the proposed Dam. These sites are highly valued by communities for reasons such as problem solving, decision making, treating diseases, protection against epidemics and enemies. Section 6.2.2.18 shows cultural sites to be affected

Tourism

During the field visits and surveys and observation, a number of tourist activities were observed, that is from water rafting to hotel/ lodge businesses and these were likely to be affected by Isimba hydro power project. Lake Victoria empties into the Victoria Nile). Due to the history and scenic topography of the area, it is attractive to tourists, especially to white water rafters (WWR) who come to take advantage of the sequence of rapids on the upper reaches of the Victoria Nile. Field surveys show that there are a number of adventure tourism operators in the project area which rely more or less entirely on the rapids of the upper Nile (from Bujagali and down to the dam site). In addition, there are other operators depending on tourists attracted by the rafting/kayaking possibilities such as horseback riding, ATV-riding and mountain biking. There are also major accommodation options (resort/lodges) along the river. Field surveys show that the WWR operators that will be affected by Isimba HPP include;

- Kyak the Nile (U) Ltd
- Nile River Explorers
- Adrift Uganda Limited
- Nalubale Rafting

07 POTENTIAL IMPACTS

Chapter 7 details the predicted social, economic and health impacts and their mitigation measures. There will be permanent and temporary impacts owing to displacement of settlements, loss of land, social infrastructure, increased health risk and agricultural land etc.
These are explained below:

Positive Impacts:

i) Employment Opportunities: Up to 1000 people will be employed during construction expected to last 4-5 years, with priority being given to qualified local residents when possible, and recruitment done together with local village leaders (LCs). Local employees will mostly be unskilled and semi-skilled workforce hired from the local communities.

ii) Economic benefit of workers camp through purchase of foodstuffs from local people. Sale of food and consumer sundries to about 1000 construction workers on a daily basis for 4 years could considerably benefit traders in local communities.

iii) The camps will require diesel fuel, food, drinking water and other consumer goods. It would be a significant social benefit if the camp procured some of the required food supplies (fish, tomatoes, onions, cassava, sweet potatoes, Irish potatoes and bananas) from local farmers or farmer organisations. Income earned over the 4-5 year construction period would make a noticeable positive socio-economic change among local farmers. Other supplies procured from national suppliers would have the same economic benefit.

iv) With the increasing demand for electricity by the day, and low generation capacity that currently exists, the operation of Isimba HPP would be more than welcome as it would contribute 180 MW to the National Grid. Addition of 180 MW of environmentally friendly hydropower to the national grid is a long-term socio-environmental benefit that will together with other power stations spur industrialisation and national economic development.

v) Access to the project area will require construction of new roads or improving existing ones. Construction of new or improvement of existing local roads will improve transport in communities with secondary benefits

such as enhanced access to health services and efficient local administration functions. This is a long-term socio-economic c benefit for local communities.

Negative Impacts:

i) **Displacement of People:** Construction of the dam, inundation of reservoir will result in the displacement of people. A total of 2076 people the project area will be displaced due to dam construction of which 968 people are in Kayunga district, 1100 in Kamuli district and 8 in Jinja district. The project area has two major islands on which people live and farm: Damba Island in Kayunga District and Koova Island in Kamuli district. Although these will be compensated and resettled, there is inevitable loss of structural social ties with people they lived by all their lives.

Mitigation:

- All affected people will be compensated with options categorized according to the impacts (refer to the RAP report).
- Those to be relocated will be assisted to move to their preferred locations in any way possible by UEGCL.
- Those who are viewed as vulnerable will be provided with additional assistance. ▪

Affected business may be entitled to income restoration compensation.

- Compensation payments, will be monitored to ensure households remain in a similar socio-economic situation or better than pre-project levels. This will also monitor potential —squanderingll of financial compensations.
- In kind settlement will be limited to those considered extremely vulnerable and unable to replace dwelling even if cash was given.
- Asset-for-asset compensation will be provided to affected persons who choose this option for fear of inability to purchase equivalent assets they previously owned.

ii) **Loss of livelihood:** Within the project area, PAPs will lose their only sources of livelihoods including small farming land, transportation and fishing activities they solely depend on. Loss of livelihoods will result from loss of land following its acquisition for construction of Isimba HPP. As already mentioned 80% of the population depend on agriculture while others practise fishing, and sand mining and stone quarrying as their major source of income, therefore constructing the dam will disrupt their livelihood hence increasing on the poverty levels. In Kiwuba village in Kayunga district and Bulagira-Bukoose in Kamuli district, some of the PAPs were seen sand mining.

Mitigation:

- During compensation, UEGCL working with local leaders shall sensitize compensation recipients about careful financial discipline to avoid misuse and eventual impoverishment.
- Project schedules shall be discussed prior to construction and during construction, in order for farmers to time their land-use activities to coincide with construction and not to unnecessarily suspend their activities.

iii) **Effect on Social Infrastructure:** Flooding of communities will affect community infrastructure such as roads connecting to villages, schools, health centers and water points. For example construction of the dam will flood community roads in villages such as Kiteredde and Nakakandwa hence affecting people‘s movements.

Mitigation:

- UEGCL shall, as a contractual obligation require the contractor to use local labor (wherever feasible) to avoid impacts that would arise from increase in local population due to non-indigenous workers. This would also improve income opportunities and economic development of the local populations.
- The contractor shall be required to minimize pressure on local resources. The contractor should endeavour to find own water for construction activities when community sources are insufficient.
- To reduce pressure on health care facilities, UEGCL's contractor shall have their own medical clinic and should negotiate a sub-contract with hospital facilities, in order to deal with more serious health issues of the contractor employees.

iv) **Misuse of cash compensation:** According to most cultures in Uganda, women have no ownership over land or most other family property implying that men will be the recipients of cash compensation before project implementation. Cash compensation could create vulnerability to women and children if misused by male household heads instead of restoring pre-project livelihoods and replacing assets (land or dwellings) lost to the project. These negative effects can be long-term and irreversible.

Mitigation:

- PAPs shall be advised about wise use of money to avoid misuse bringing destitution to their families.
- Monitoring of how compensation payment is spent will need to be a part of the RAP internal and external monitoring.

v) **Population Influx into village were construction camp are located:** Owing to the high unemployment levels within the project Districts, any significant development that could result in employment will tend to attract large numbers of job seekers. This influx is expected to start during construction phase. It is difficult to estimate the number of people who will be attracted by the project but once the people hear about the project very many will come to seek employment.

Mitigation:

- To minimize population influx in the area, the contractor should give preference to employing local labour.
- HIV/AIDS awareness programs shall be conducted in the project areas by the contractor.

vi) **Occupational safety and public risk:** The project will have health and safety risks to construction workers and the general public. This risk will originate from moving equipment, material transportation through population centers and construction along alignments adjacent to residential areas, potentially posing accident risk to the general public. Health risks may originate from inadequate or improper sanitation on site.

Mitigation

- The contractor will have a fully functional clinic at the project site and this can be used by local people who suffer from injuries associated with project workers.
- Contractors shall provide all workers with requisite Personal Protective Equipment (PPE) appropriate to the job at hand. Foremen will be responsible for not permitting a worker on site unless they are wearing the appropriate PPE. The Contractor shall provide appropriate signage reminding use of PPE at appropriate locations in the project area including ancillary work sites.
- Contractor shall ensure adequate fire safety at workers camp by ensuring presence of fire-fighting equipment.
- Contractor shall provide on-site toilet and washing water for workers.

- Contractor shall provide —No smokingll signs in office, communal places construction camps as well as high risk areas prone to fire hazards e.g. near fuel tanks.
- Working with local leaders, the contractor will sensitise local people about safety near construction sites, possible accident risk and how they can be avoided.
- The contractor will have a fully functional clinic at the project site and this can be used by local people who suffer from injuries associated with project workers.

vii) **Road traffic risks**: Vehicles hauling concrete weir and line construction materials and workers might cause traffic hazards in trading centres, near schools, health centres and churches. Children, women and elderly people are often at higher risk of traffic related accidents. The intensity is _medium' because the spatial extent is regional. Sensitivity of receptors to may be _high' considering the transportation trucks will pass through a number of villages and trading centers like Nampanyi in Kayunga district and Bulangira- Bukoose in Kamuli district. Therefore impact significance is predicted to be major.

Mitigation:

-
- The contractor will control haulage speed especially in trading centers or near schools by placing requisite warning signs.
- Drivers will be inducted at the start of the Project about road safety and due diligence to ensure safety of other road users.

viii) **In-migration into project area:** The indirect effects of inward migration will include greater pressure on natural resources such as fuel wood, building materials, groundwater, fish, and grazing and cultivated land. The occurrence of employment opportunities may attract an external workforce to the project areas in Kayunga district on the left bank and Kamuli and Jinja district at the right bank.

Mitigation:

- Implement health, STD and HIV/AIDS awareness/training for the workforce.
- Contractor should ensure that the workplace has adequate access to medical facilities.
- Sensitization of the local communications should be carried out to manage community expectations of the project.
- The contractor should ensure preferential treatment is given to the local communities at the time of employment in order to combat conflicts/tensions in the project area.

ix) **Impact on religious and cultural resources:** The project will impact on the cultural heritage of the area at the household and at community level. At the household level, the cultural properties to be impacted are the graves of households in the area to be inundated. These will have to be relocated along with the homesteads .This will be handled by the Resettlement Action Plan (RAP) of the project area where compensation rates will be determined with the district officials as per the laws of Uganda. At the community level, the sacred sites where traditional worship activities take place will have to be moved away from the area .Relocation ceremonies have to be conducted at the eight locations mentioned (Section 6.2.2.18) to move the spirits from the places affected by the implementation of the project.

x) **Construction noise and vibration:** Noise and vibration from various construction activities on Isimba HPP will originate from, blasting of rocks, excavation, drilling and grading works and eventhough the project area is sparsely inhabited, noise may affect in villages Nampanyi, Nakakandwa and Kasana in Kayunga district as well as, Bukasa and Bugumira villages in Kamuli district.

Mitigation:

- A grievance procedure should be put in place to enable communities in the project area report noise or vibration effects resulting from construction works.
- Monitoring of noise in the project area should be undertaken to ensure it does not exceed regulatory limits.
- Any damages caused by vibrations shall be compensated by the contractor.

xi) **Land take and associated socio-economic effects:** A number of settlements which will not be displaced will permanently or temporarily lose agricultural land. A total of 2867.6 acres will be required for dam, sub-station and reservoir construction work. In Kayunga district, 1631.4 acres will be acquired, while Kamui and Jinja district will require 1221.8 acres and 14.4 acres respectively.

Mitigation:

- All affected people will be compensated as per the RAP report. Those to be relocated will be assisted to move to their preferred locations in any way possible by UEGCL.
- Those who are viewed as vulnerable will be provided with additional assistance necessary at the time of their displacement.
- Affected business may be entitled to income restoration compensation.

The project may also lead to loss of livelihood for people in the project area. The majority of people in the project area are primarily farmers while other practice small-scale trading (selling produce in road-side markets). Therefore loss of farmland will lead to temporary loss of livelihoods, recovery of which may be delayed by inept use of compensation payments.

Although PAPs will be compensated, cash compensation could create vulnerability of women and children if misused by male household heads.

Mitigation:

- During compensation, the project working with local leaders shall sensitize compensation recipients about careful financial discipline to avoid misuse and eventual impoverishment. PAPs should be advised about wise use of money to avoid misuse bringing destitution to their families.

- Monitoring of how compensation payment is spent will need to be a part of the RAP internal and external monitoring.

xii) **Impacts of camp and equipment yard operation:** While set up and use of the camp and equipment yard will have positive impacts such as employment and economic or trade opportunities for local people, there are also potential negative impacts such as:

- Excessive lighting at camp and yard,
- Localised waste oil and fuel spills,
- Noise and air emissions from electricity generator, ▪

Fire risk at camp site and yard,

- Soil compaction at camp and yard,
- Over-speeding, night travel and wildlife poaching, ▪

Improper camp and yard decommissioning,

- Improper waste management at both camp and equipment yard.

xiii) **Impact on Tourism:** Development of Isimba hydropower complex has the potential to affect a number of tourism, eco-tourism and recreational and their associated experiences. These include WWR, Eco-tourism and Aesthetics activities Development of Isimba hydropower facility will result in the inundation of Simba Falls and preclude white-water rafting on Simba Falls and on the rapids upstream. Four white water rafting companies which are located at the left bank side in Kayunga District will be impacted upon. These are Kayak the Nile (u) Ltd, Nile Rivers Explorers, Nalubale Rafting, and Adrift Uganda Limited. Regarding aesthetics, the falls will be inundated and a new reservoir will be created upstream of the hydro power infrastructure. The aesthetic appeal of the Victoria Nile at the dam location will be altered by the presence of the power station. More to this, aesthetics of the Victoria Nile upstream of the dam will be changed due to the new reservoir. The Islands that currently exist in this stretch of the river will be submerged, for example Damba Island located in Kayunga district and Koova Island in Kamuli district. Construction of a dam on the river will therefore have some impacts on the landscape and visual qualities within the project area.

08 SOCIAL MANAGEMENT PLAN (SMP)

Budgets below have been proposed for social management system and community development initiatives that the project may consider in local communities.

Table 0-2: Budget for social management system

	Activity	Cost (USD)	Budget notes
1	Constitution of Project Consultative Committee	12,500	USD 2500 per sub-county (s/c) meeting for 5 sub-counties (3 s/c in Kayunga, 1 in Kamuli and 1 in Jinja District respectively).
2	Training	450,000	Lumpsum for training indicated in section 8.3 Each
3	Facilitation of LC 1 local leaders during community engagement)	81,000	LC Chairperson in 27 villages facilitated per month for 5 years at USD50.
4	Monitoring		
	▪ Internal- monthly	180,000	1000 USD per month for 5 years.
	▪ External- quarterly	60,000	1000 USD per quarter.
7	Committee meetings	30,000	Cost of 6 people for each of 5 Sub-Counties, meeting every quarter for 5 years at USD50 per person per meeting (Note: It is planned that this social management plan will be implemented over a 5 year period: 1 year during RAP implementation and 4 year during the monitoring phase post RAP implementation)
8	Reporting	120,000	Cost is over four years.
	Grand total	**933,500**	

Table 0 3: Estimated budget for community development initiatives

	Activity	Cost (USD)	Notes
1	Work with Kayunga, Kamuli and Jinja districts support primary leve schools in the project area.	600,000	It is noted that although primary schools are available in project area, a number of them are facing challenges such as; limited classrooms, no staff housing, poor sanitary facilities and lack of furniture.
3	Support Kiyunga HC II in Kamuli District and Bukamba HC II in Kayunga District to improve health care service delivery.	240,000	Each HC II to be supported with 120,000 USD
	Grand total	**840,000**	

The 4-5 years of construction will bear both positive and negative social impacts that can be avoided or mitigated with recommendations herein proposed. Overall, the project will have immense long-term social-economic benefit for the country in terms of increased hydropower added to the grid hence spurring local and national development.

1 INTRODUCTION

1.1 Overview of Uganda's Power Sector

a) Historical perspective

The period between 2003 and 2007 is remarkable in the history of Uganda's electricity sector because of a prolonged drought which affected operations of the Owen Falls Dam, then the country's main source of electricity. Impaired hydrology led to substantial decline in electricity generation resulting into a supply deficit of up to 210 MW, causing 24-hour load shedding. Acute electricity supply shortage negatively impacted the gross domestic product (GDP), dropping at the rate of 1.5% per annum. In spite of the decline in generation, demand for electricity continued to grow, widening the gap and peak demand reached 380MW.

The energy ministry (MEMD) in 2006 prepared a plan to meet the shortfall in electricity supply in the short, medium and long terms. The broad objective was not only to provide adequate and reliable power supply, but to also anticipate new electricity demand ahead instead of the old approach of chasing demand forecasts. The short-term measures involved procurement of thermal generation to provide temporary relief. About 150 MW of additional thermal power plants were installed to provide relief to the consumers at Lugogo, Mutundwe and Kiira sub-stations, the Government also procured the 50MW Namanve Jacobsen Heavy Fuel thermal plant. However, the stop-gap measures were at a cost. Power became expensive, forcing the Government to subsidise up to $9.5 million every month despite increase in the end-user tariffs. The introduction of thermal power generation in the energy mix was combined with aggressive energy loss reduction strategy and an energy efficiency/ demand side management. To improve energy efficiency, the 800,000 energy-saving bulbs were procured at a cost of $1.2 million and distributed freely to households and about 30 MW were saved under this demand-side intervention. The energy ministry also carried out energy audits in various industries, commercial buildings and institutions to improve their energy management practices.

The medium-term strategy involved the development of the 250MW Bujagali Hydropower Project on River Nile. Construction work of this project started in May 2007, and the plant was fully commissioned in July 2012. The Bujagali project doubled the electricity supply, reducing load-shedding and replacing expensive thermal power generation. The plant was commissioned unit-by-unit basis in response to energy ministry's strategic decision to replace the expensive thermal power generation at the earliest date and minimize load shedding. The other mediumterm measure was to promote construction of small hydropower plants around the country. A number of small hydro power projects have already been completed and commissioned.

In September 2012, Nyagak Hydropower Plant of capacity 3.5 MW was commissioned, and this supplies the off-grid West Nile region. Other plants commissioned recently and delivering power to the national grid are

- 18MW Mpanga small hydro power station (Commissioned in 2011)
- 13MW Bugoye small hydropower station (Commissioned in 2009)
- 6.5 MW Ishasha mini-hydropower station (Commissioned in 2011)
- 10MW Mubuku III mini-hydro station(Commissioned in 2008)
- 9 MW Buseruka hydropower plant renamed Kabalega Hydropower Plant (Commissioned in January 2013)

It is estimated that there are over 50 small hydropower sites around the country, which can generate a total of 180MW to supplement bigger projects on the River Nile.

Uganda Government is now focused on construction of the 180 MW Isimba Hydro power project and 600 MW Karuma Hydro power project which will be a major addition to the national hydropower pool.

b) Reform in the energy sector

Uganda carried out reforms in the electricity sector that resulted into the unbundling of Uganda Electricity Board into generation, transmission and distribution entities. The reforms have subsequently defined institutional, legal and policy framework, as well as the market structure. In the pre-reform era, Government assumed total control of the energy sector. This resulted in the creation of public enterprises for reasons that kept shifting depending on the regime that was making the policy. The electricity sector was thus dominated by Uganda Electricity Board (UEB) a state-owned and controlled body which managed generation, transmission and distribution of electricity in the country as well as planning for future expansion. From 1971 to 1986 Uganda's economy was marred by economic crises resulting from extreme political instability. During that period, real GDP per capita fell by a quarter, and by 1987 most productive sectors, including the electricity sector, nearly failed. Electricity production had fallen from 150 MW in 1963 to 60 MW (Mawejje et al. 2012)[1].

In 1997, Uganda Government formulated a strategic plan and energy policy for transforming the power sector into a financially-viable electricity industry with the following objectives:

- Making the power sector financially viable and able to perform without subsidies from the budget and moving to cost reflective tariffs.
- Increasing the sector's efficiency.
- Improving the sector's commercial performance.
- Meeting the growing demand for electricity and increasing coverage. ▪

Improving the reliability and quality of electricity supply.

- Attracting private investment.

An Electricity Act was enacted in 1999 and this provided for the establishment of an independent regulator. The regulator is responsible for setting tariffs and other charges, issuing licences for generation, distribution and transmission, regulating the quality of services and technical standards and enforcing compliance.

In 2001, the assets, liability and operations of the UEB were transferred to separate limited liability companies for generation, transmission and distribution.

The successor companies were registered in accordance with the Companies' Act under the following names; Uganda Electricity Distribution Company Limited (UEDCL), Uganda Electricity Transmission Company Limited (UETCL) and Uganda Electricity Generation Company (UEGCL).

UEDCL owns the electricity supply infrastructure operating at 33 kV and below. Its assets were leased to UMEME in 2005 under a 20-year concession.

UETCL owns and operates the grid connected electricity supply infrastructure operating above 33kV. It is the only company responsible for buying power in bulk from generators and selling it to distribution companies.

The Electricity Act also set up a Rural Electrification Fund to promote rural electrification. The fund is administered by the Rural Electrification Agency. The Act also established a tribunal to handle any electricity dispute. It is operational.

Competition was introduced through licensing of independent power producers. This has attracted a number of private sector-led investments in the electricity sector. This has increased electricity supply enough to meet the current demand. The current installed electricity capacity is 800 MW compared to 150 MW Uganda used to produce in the 1960s. Under the rural electrification programme, the Government has put emphasis on connecting electricity

[1] Mawejje. J, Munyambonera. E, Bategeka. L, 2012: Uganda's electricity sector reforms and institutional restructuring Economic Policy Research Centre.

to district headquarters, productive centres like factories and trading centres and social services such as health centres, educational institutions and water supply points.

c) Energy sector performance and Uganda's energy mix

According to energy sector Performance Report 2011-2012, the country's installed generation capacity is currently 818.5 MW after the full commissioning of the 250 MW Bujagali HPP and Electromax's 32 MW. Large hydropower generation accounts for 630 MW while smaller hydropower plants account for 41.5 MW, with 26 MW generated through co-generation using biomass at sugar factories[2]. However, the current dependable capacity is about 650 MW.

Actual peak demand is 487 MW and the country experiences very minimal power shortages for the moment. Table below shows operating power stations in the country currently supplying power to the grid.

Table 1-1: Power stations currently supplying power to the grid and their capacities

Type of generation	Installed capacity	Current generation	Remarks
Large Hydropower	603 MW	200 MW	180 MW(Nalubaale HPP)
			200 MW (Kiira HPP)
		250 MW	250 MW (Bujagali HPP)
Mini Hydropower	56.5 MW	23.5 MW	Bugoye-13 MW, Mpanga -18 MW, Ishasa 6.5 MW, KCCL-10.5 MW, Kilembe Mines-5MW, Nyagaka I -3.5 MW
HFO Thermal plants	100 MW	48	50 MW (Electromax)
		50	50 MW (Jacobsen-Namanve)
Diesel Generators	2.5 MW	2.5 MW	0.75 MW(Moroto)
			0.75 MW (Adjumani)
			0.75 MW (Moyo)
			0.25 MW (Kalangala)
Biomass power	29.5 MW	8	Kakira (22 MW)but 12 MW to grid
			Kinyara (7.5 MW)but 5 MW to grid
Total	**818.5 MW**	**558.5 MW**	

Source: MEMD 2012: Energy & Mineral Sector Performance Report 2011-2012, p13.

Uganda's consumption of energy is very low with characteristics below:

- Total energy consumption: 10,149,936 Tonnes of Oil Equivalent (TOE).
- The energy consumption per capita was 341.6 kilogram of Oil Equivalent (kgOE); and commercial consumption per capita was 28.9 kgOE.
- Traditional fuels (fuel wood and charcoal) are the predominant source of energy for people's livelihood.

Uganda consumes roughly 27,000 barrels of oil per day. The country's import bill on petroleum products is estimated at USD 2 billion annually. Biomass (fuel wood and charcoal) remain the predominant source of energy for livelihoods in Uganda[3] and about 90 percent of the population relies on these fuels for energy consumption. The country also relies on limited hydropower capacity. Petroleum products are imported primarily through Kenya and Tanzania via trucks.

[2] MEMD 2012: Energy & Mineral Sector Performance Report 2011-2012, p13.

[3] Okure, M. 2011: Status of Liquefied Petroleum Gas in the Energy Mix of Uganda", Makerere University, Uganda.

d) Challenges in energy sector

Notable challenges however are increasing power supply, reducing power losses and providing power at affordable tariffs. Local banks are unwilling to undertake long-term lending to power projects. There is also lack of ready projects with accomplished feasibility studies. There has been difficulty in bringing all stakeholders on board to embrace the power sector reforms. Fuel supply constraints inhibit thermal power generation. Regarding accessing electricity the major constraint is the inability, mainly of the rural and peri-urban dwellers, to afford connection costs.

Generally a lot has been achieved in the electricity sector in the last 50 years and addition of Isimba power station to the national generation pool will consolidate these achievements.

1.2 Project Background

a) Project objective

Enactment of the Electricity Act, 1999 paved way for liberalisation of Uganda_s energy sector, allowing the establishment and operations of independent power producers. This Act liberalized the power sector breaking up Uganda Electricity Board that had monopoly for power generation, transmission and distribution, into three companies responsible for generation (UEGCL), transmission (UETCL) and distribution (UEDCL) of electric power in Uganda. UETCL has the responsibility of transmission of high voltage power, bulk purchase of power and bulk sale to independent power distributors. UEDCL owns the electricity supply infrastructure operating at 33 kV and below. Its assets were leased to UMEME in 2005 under a 20-year concession. UETCL owns and operates the grid connected electricity supply infrastructure operating above 33 kV. It is the only company responsible for buying power in bulk from generators and selling it to distribution companies. UEGCL owns the Kiira and Nalubaale hydropower stations. Its generation assets were leased to Eskom Uganda Limited in April 2003 under a concession agreement.

Energy is one of the key sectors in Uganda_s economy. On one side the sector provides a major contribution to treasury resources (fuel taxes, VAT on electricity, levy on transmission bulk purchases of electricity, license fees and royalties) and foreign exchange earnings (power exports). On the other side significant public investment has been injected into the sector, particularly in the area of electricity supply. Following liberalization, the power sub sector is now attracting the largest private sector investments in the country. MEMD is responsible for policy formulation, implementation and monitoring the energy sector.

Uganda_s access to grid electricity is currently less than 15% with majority of the population depending on traditional biomass energy. Uganda_s per capita energy consumption of 0.3 tonnes of oil equivalent (TOE) or 12.72 GJ, is among the lowest in the World. Over 90% of energy consumption is biomass, mostly wood and charcoal, which is not environmentally sustainable.

Isimba Power Station is to be constructed on the Victoria Nile, downstream of Bujagali Power Station. The contract for feasibility studies and design was awarded to a consortium of engineering firms FICHTNER and NORPLAN in association with KAGGA & PARTNERS a Ugandan engineering consulting practice. The latter is responsible for managing the preparation of EIA, SIA and resettlement plan of the project.

Power to be generated by Isimba hydropower dam would considerably increase the nation_s installed capacity of a renewable and cheaper energy supply. Without this project, 180 MW of electrical supply would be forfeited on the national grid. This would mean continued power scarcity and increased load shedding when supply is outstripped by demand. Isimba HPP is in line with Uganda Government_s continued pursuit for sufficient power supply to match present and foreseeable future national demand.

According to Uganda_s National Environment Act Cap 153, Section 10(a, b and c, i.e. electrical generation stations, transmission lines and substations respectively), the proposed project is categorized among —Third Schedule ll developments for which EIA is mandatory.

Additionally, World Bank/IFC classify proposed developments into four categories (A, B, C, and FI) depending on the type, location, sensitivity and scale of the project and nature and magnitude of its potential environmental impacts. These categories are explained below:

Box 1: Project categorisation for environmental assessment

Category A*: have high risk and likely to have significant adverse environmental impacts that are sensitiv e, diverse, or unprecedented.*

Category B*: have modest risk and will have potential adverse environmental impacts on human populations or environmentally important areas --including wetlands, forests, grasslands, and other natural habitats but are less adverse than of Category A projects.*

Category C: *are likely to have minimal or no adverse environmental impacts. For these, no detailed EIA is necessary.*

Category FI: *if it involves investment of IFC funds through a financial intermediary, in subprojects that m ay result in adverse environmental impacts. In addition, in some capital markets projects, IFC funds are not targeted to specific subprojects but the financial institution has operations which may have adverse environmental impacts.*

Based on above categorization Isimba HPP is classified as —Category All project and therefore subject to full Environmental and Social Impact Assessment in spite of similar other HPP developments e.g. Kiira, Nalubaale, Bujagali power stations near (upstream) of proposed project site.

Isimba hydropower project will comprise a powerhouse, a reservoir, 132 kV transmission line and associated substations. However EIA for the transmission line was prepared and submitted to the client as a separate document.

b) Project relation to the National Development Plan, NDP (2010/11 - 2014/15)

The NDP recognises that limited access and use of energy significantly slows down economic and social transformation (NDP, Sec 6.3 _Energy Sector', p149)[4]. The low energy consumption per capita in Uganda has largely contributed to slow economic transformation by limiting industrialisation and is a major factor affecting the country's investment competitiveness. Energy exploitation pattern is such that biomass accounts for 92% of total energy consumed while fossil fuels account for 7 %and electricity only 1 %. Most of the biomass energy is from wood consumed in the form of charcoal and firewood. This consumption is not sustainable because it heavily relies on nonrenewable energy that is costly, untimely, limited and has environmental effects.

Uganda has one of the lowest electricity consumption per capita in the world. It was estimated at 69.5 kWh per capita in 2009. This is significantly lower than Africa's average of 578 kWh per capita and the World's average of 2,752 kWh per capita (NDP, Line 388, p149). It compares poorly with Kenya and Ghana that are 2.3 times and 3.6 times better, respectively. The consumption per capita is about 55 times lower than that of Malaysia (3,668 kWh per capita) and 123 times lower than Korea's 8,502 kWh per capita. The current supply levels cannot support heavy industries like steel mills, textile mills and aluminium processing plants. This partly attributed to little investment in the power generation for over 40 years since commissioning of Nalubaale dam. The policy of supplying electricity to meet the demand within the economy has partly contributed to low prioritisation of the energy sector subsequently limiting investment. Power is a prerequisite for investment not the opposite. It is an indispensable parameter in attracting investments.

[4] *Republic of Uganda, National Development Plan, (2010/11 - 2014/15)*

In order to create a favourable investment climate and attract heavy investments in the industry sector, there is need for policy reform to ensure sufficient electricity generation capacity is created. Given the current levels of electricity generation, there is need for radical and drastic action to step up electricity supply to drive the economy to the indicators compared to middle income countries like Malaysia and Korea. Table 1-2 indicates capacity requirements to raise power consumption from 75 kWh per capita (2010) to 674 kWh by 2015 subsequently to 3,670 kWh per capita by 2040. The fact that installed capacity is currently (Year 2013) less than 900 MW and should rise to 3885 MW in Year 2015 fortifies the urgency of investment in power generation stations.

Table 1-2: Electricity generation projections to meet NDP targets

Year	2010	2015	2020	2025	2030	2035	2040
Consumption (kWh/capita)	75	674	1273	1872	2470	3069	3668
Capacity (MW)	425	3885	8601	14670	22222	31252	41738

Source: NDP 2010, Line 389, p151

During the NDP period(2010/11-2014/15), Government's investment priorities will include physical infrastructure development mainly in energy, railway, waterways and air transport; Human resources development in areas of education, skills development, health, water and sanitation; facilitating availability and access to critical production inputs especially in agriculture and industry; and promotion of science, technology and innovation. Clearly the NDP's development approach intertwines economic growth and poverty eradication and energy is therefore a key driver in achieving NDP objectives. Indeed strategic pillars for increasing stock and improving quality of public physical infrastructure in the energy sector, according to NDP (Ref. Table 4.4, p46) include:

- Improving national power generation capacity.
- Expanding power grid and improving transmission and distribution infrastructure in the country

The NDP (Ref. Sec 6.3.2, p152) recognises limited generation capacity as a key constraint to performance of Uganda's energy sector and therefore advocates for formulation of a public-private partnerships (PPP) framework to increase private sector involvement in the energy sector (Ref. Line 397, Objective 5, p154). It is planned that Isimba HPP will be developed as a PPP and this is in line with aspirations of the NDP to involve the private sector in financing development of energy projects.

c) Project relation to Uganda Vision 2040

On April 18, 2013, Uganda launched the Vision 2040 plan - a 30 year strategy aimed at propelling Uganda from a lower to a middle income economy. Uganda Vision 2040 builds on the progress that has been made in addressing the strategic bottlenecks that have constrained Uganda's socio-economic development since her independence.

Uganda Vision 2040 recognises energy and in particular electricity as a key driver of socio-economic transformation noting that for Uganda to shift from a peasantry to industrialized and urban society, it must be propelled by electricity as a form of modern energy. To achieve the targets of Vision 2040, Uganda will develop and generate modern energy to drive the industry and services sector. It is estimated that Uganda will require 41738 MW by year 2040 thus increasing its electricity consumption per capita to 3,668 kWh. Furthermore the access to the national grid must significantly increase to 80 %. Uganda will fully exploit it hydro power potential by developing large and small hydro power plants (Uganda Vision 2040, Sec 4.2.3 Energy, p46)[5] and therefore development of Isimba HPP is contiguous with this Vision's aspirations.

[5] National Planning Authority (N PA) 2012, Uganda Vision 2040.

1.3 Objective of the SIA

The SIA aimed at assessing potential social impacts of developing and operating the proposed hydropower plant and propose mitigation recommendations.

Objectives of the SIA were to:

- Conduct social baseline in the project area.
- Conduct consultations with relevant stakeholders, including potentially affected persons, to obtain their views and suggestions regarding the environmental and social impacts of the proposed project.
- Identify potential negative and positive social impacts of the Project and propose mitigation measures.
- Prepare an SIA report incorporating results of social analysis.

Since Isimba HPP will be developed as a PPP, the assessment entailed consideration of Uganda legal requirements and IFC performance standards. Note that Environmental impacts of the proposed hydropower plant were analysed and documented in a separate volume, therefore this report is limited in scope to assessment of only social impacts.

1.4 Project Justification

Isimba HPP is in line with Uganda government's continued pursuit for sufficient power supply to match present and foreseeable future national demand. Overall, the level of load shedding required is about 175 to 190 MW during peak hours, 70-90 MW during shoulder hours, and 60-120 MW in off-peak hours.

Over the last three decades, Uganda has experienced power shortage, with considerable adverse impact on national economy and environmental conservation such as resulting from extensive use of biomass. More recently (early 2000s), government adopted generation of power from diesel and HFO thermal power plants as a short-term measure to abate load shedding but these are associated high fuel cost and gaseous emissions. With demand greater than generation capacity, chronic load shedding is inevitable. In 2000 increased generation capacity from commissioning of the first two 40 MW units at Kiira Power Station relieved the load shedding but subsequent drop in Lake Victoria water levels due to drought and increased flow through the two dams (Nalubaale and Kiira) led to reduction in availability of water for power generation, again worsening the power rationing.

The demand for electricity has steadily increased in step with growth of the national economy. The total domestic power demand grew from about 250 MW in 2001 to 340 MW in 2006, and it is possible that a shortage of power supply will occur in future even with the Bujagali HPP in service. To address the power shortage, Uganda government reverted to emergency thermal generation to supplement available hydropower supply. Thermal power generated from Diesel plants is costly and has to be subdivided by Government to make it affordable by consumers. Besides the cost, thermal power sources are associated with considerable localized air pollution and greenhouse gases. Emergency thermal power plants were planned to operate until last year (2010) when cheaper, renewable and cleaner hydropower would become available from hydropower dams such as Bujagali HPP, Isimba, Karuma and other mini-hydropower.

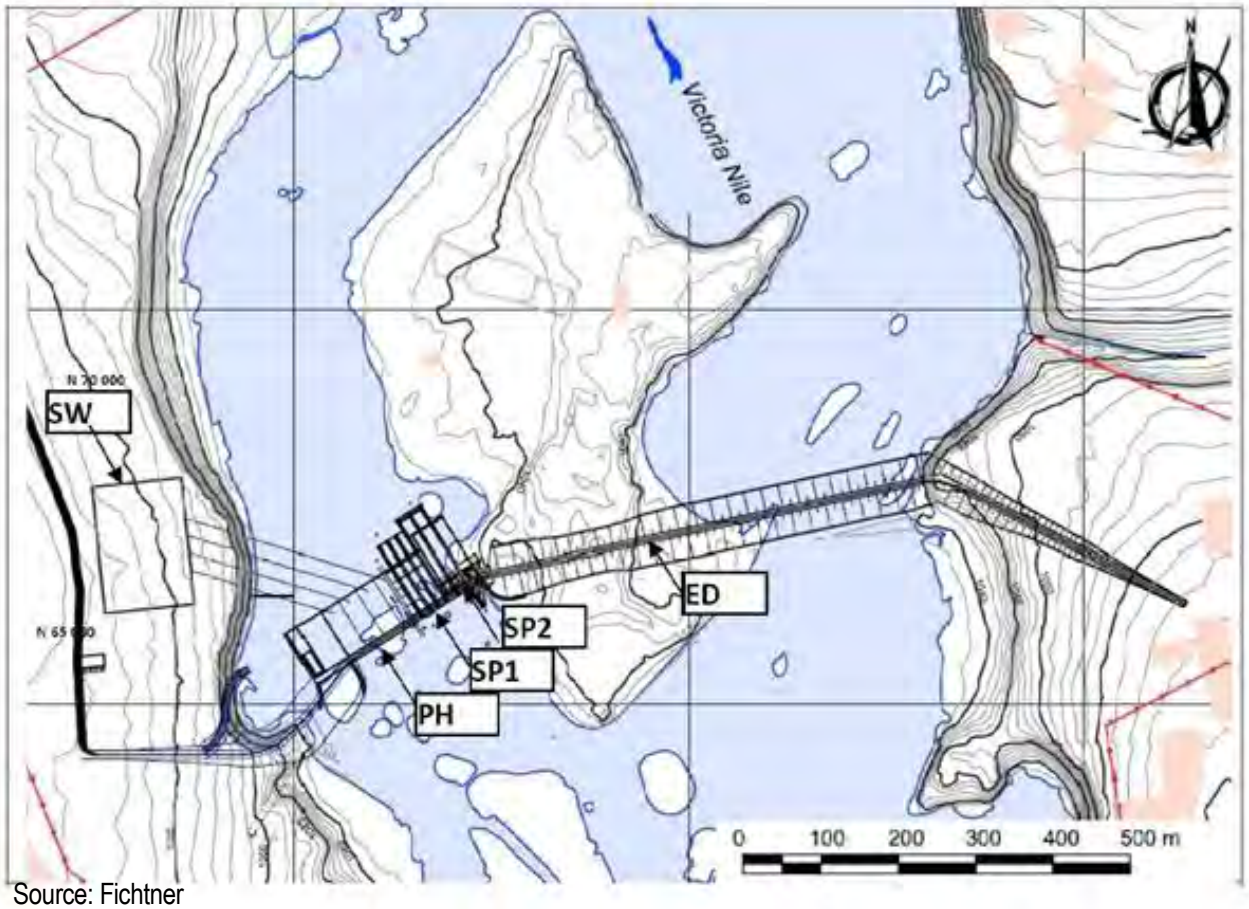
2 PROJECT DESCRIPTION

2.1 Nature of dam structure

Due to a relatively low water head available, the power station will have its powerhouse structure embedded in the overall water retaining structure. This offers the most convenient and cost-effective option. The power station will comprise Kaplan turbines which provide for easier maintenance since similar units are installed at Bujagali HPP and Nalubaale HPP (formerly Owen Falls Dam). A rockfill dam with central clay core was selected for power station's structure. This choice was based on abundant availability of good rock material and clay in the vicinity of project site.

2.2 Layout

The powerhouse and spillways will be located in the left river channel. The layout of Isimba hydropower project main structures is presented in Figure below.



Source: Fichtner

Figure 2-1: Layout of Isimba HPP

From the figure above, the outdoor switchyard will be on the left bank and connected to the powerhouse with four overhead lines. To provide adequate space at the erection bay and enable easy access, the bay will be located west of the powerhouse and main access road will lead to this location.

2.3 Powerhouse

The powerhouse structure will be monolithic with the intake, turbine block and outlet are to be casted as integral parts of the powerhouse. Water will enter each intake through a double entrance protected by trash screens. Each intake can be isolated from the reservoir by hydraulic servo-assisted fast closing guard gates. For inspection and maintenance purposes manually operated bulkhead gates upstream of the trashracks are provided. Downstream of the guard gates, the double waterway passages merge into a single section leading to the turbine spiral case. The waterway entrances are shaped to minimize hydraulic losses. Similarly to the intake, the outlet works shall be design with due attention to provide for the efficient operation of the turbines. It is intended to have steel-lined draft tubes immediately below the turbine runner. Each draft tube will be further divided into two channels that discharge water to the Tailwater. At the end, the draft tubes shall be equipped with the bulkhead gates to enable their closure for inspection and maintenance. Depending on the actual geological conditions, if necessary the tailrace channel immediately downstream of the draft tube outlets will be concrete lined or some other measure for erosion protection may be adopted.

Hydromechanical and electrical equipment will be placed within the powerhouse itself. Downstream of the turbine units, three floors are envisaged for placement of all necessary equipment. Only transformers are intended to be located on the outside platform at elevation 1045 masl. This should enable easy evacuation of energy toward the substation over one short overhead line. The control building will be located at the west end of the erection bay within the powerhouse. The control building shall contain enough space for all administrative, controlling and equipment rooms and offices.

2.4 Spillways

Main data of the selected spillway gates are presented in the following table.

Table 2-1:Main characteristics of the spillways

Selection	Units	Lower radial gates	Upper radial gates	Flap gates
Width	meter	9.5	14	11
Gate height	meter	10.5	10.5	2.5
Number of gates	unit	3	2	2
Sill level	Meters above sea level	1029	1044.5	1052.5
Top of gate	Meters above sea level	1039.65	105.55	10.55
Capacity of each gate	m_3/s	923	1105	196

The intake pond has an area of about 20 km^2 and the maximum flood level of the reservoir, el. 1055, would be reached within 2 hours if the power plant has stopped and the inflow is 1375 m^3/s (capacity of upstream power plant).

The spillway was designed for the following criteria:

- Pass the 1000-year flood with the reservoir level not exceeding the elevation of the top of the dam body. ▪ No risk of cavitation at the design flood.
- Pass the maximum reservoir level with limited increase of the reservoir level, i.e. not overtopping the embankment dams.

The spillway structures will comprise:

- Three submerged radial gates for flood spilling, diversion during construction and for flushing of sediments accumulating in the reservoir
- Two radial gates located above ogee crest spillways with a downstream plunge pool.
- Two flap gates located within each of the upper radial gates having the purpose of diverting floating debris during normal operation of the power plant.

2.5 Electrical Equipment

a) Generators

The generators will be vertical shaft, synchronous units each directly coupled to a Kaplan turbine. Key data about the generators is:

- Number of units 4
- Capacity 53 MVA
- Power 45.8 MW
- Cos Ø 0.85
- Voltage 12 - 15 kV
- Rotational speed 88.2 rpm.

The generators will be indirect water cooled closed air-circulation by ―rim ventilationll and a multiple air to water heat exchangers mounted on the stator frame.

b) Main Transformers

The step-up transformers from the generator voltage to transmission line voltage (132kV), will be of three phase, air cooled type. Main characteristics are:

- Voltage 132 kV
- Capacity 53 MVA

2.6 Isimba Substation

The substation shall have double busbar type with two line bays, 4 Transformer bays, 1 bus coupler and 2 future bays, one control building and necessary access roads, pavement and drainage system.

Isimba 132 kV substation will comprise 1 (one) double busbar system 132 kV outdoor, steel work and busbar, lattice type, busbar conductors as follows:

1 (one) busbar coupler:

- 1 (one) set SF6 circuit breaker,
- 2 (two) set of disconnector with 1 (one) earthing switch,
- 3 (three) multi-core current transformers.

2 (two) busbar measuring bay consisting of:

- 6 (six) voltage transformer.
- 2 (two) set of disconnector with earthing switch

2 (two) line bays consisting each of

- 1 (one) set SF6 circuit breakers
- 1 (one) set of double busbar disconnectors with 1 (one) earthing switch,
- 1 (one) set of disconnector with 2 (two) earthing switches,
- 3 (three) multi-core current transformers,
- 3 (three) voltage transformers,
- 3 (three) lightning arresters

4 (four) transformer bays with:

- 1 (one) set SF6 circuit breaker,
- 1 (one) set of double busbar disconnectors with 1 (one) earthing switch,
- 1 (one) earthing switch,
- 3 (three) multi-core current transformers,
- 3 (three) voltage transformer,
- 3 (three) lightning arresters

In addition to the above following is included in the equipment of Isimba Substation: the auxiliary power system, power and control cables, earthing system, power and lightning installation control and monitoring equipment, protection equipment and telecommunication system.

2.7 Power and Energy Production

From available net head and discharge, the installed plant power capacity will be 183.2 MW based on the following information:

- Normal operating level in headwater: 1054.5 masl
- Tailwater level, 4 units in operation: 1039.1 masl

Gross Head: 15.4 m

- Net Head (assumed losses 0.3 m): 15.1 m

Discharge 1 turbine: 343.75 m^3/s

- Discharge 4 turbines: 1375 m^3/s
- Assumed overall plant efficiency: 0.90
- Installed capacity, 4 turbines: 4 x 45.8 MW = 183.2 MW

2.8 Transmission Line Design, 132 kV

The transmission line from Bujagali to Isimba shall be designed for 132 kV voltage level for the following reasons:

- The 132kV voltage level offers easy grid extensions to the north, to the Kayunga and Kamuli districts in the future.
- Although the 132kV transmission line itself is more expensive than a 220 kV one, the overall costs for 132kV substation and 132kV transmission line are less compared with overall costs of substation and line both at 220 kV level.
- Electro-technical equipment of Bujagali and Isimba Substations would be similar and this will provide for easier operation and maintenance during emergency cases, procurement of spare parts, etc.
- The 180 MW will be a peak load only and transmission losses during the majority of the operation will be significantly less than for these peak load.

3 PROJECT ALTERNATIVES

3.1 Introduction

The purpose of this chapter is to present and compare the different alternatives that have been considered for the layout of Isimba HPP. The analysis concludes with selection of the most favourable alternative, which is then described in detail.

3.2 Alternative Dam Site Locations

The position of the Simba Falls, as given in the Master Plan by Kennedy & Donkin, was used to locate the potential project site. Having in mind the position of the Kalagala Falls as upstream boundary and location of the Kyoga Lake as downstream boundary it was quite straightforward to conclude that the range of possible locations for the development of Isimba HPP is quite limited.

Investigation of the morphology of the Victoria Nile showed that most of the water head is concentrated in the first several kilometres downstream of the Kalagala Falls. Nevertheless, up to the location of the Simba Falls, it is estimated that the river has an approximate slope of 0.05%. Having in mind very limited total head available between the Kalagala Falls and Kyoga lake, it is concluded to consider the location of the Simba Falls as the most upstream feasible location for Isimba HPP and investigate further possibilities at the locations downstream of the Simba Falls.

On the other hand, some 9 km downstream of the Simba Falls, upstream of the gauging station Mbulamuti, it is observed that the river section widens significantly. Having in mind increase in economic costs caused by larger amounts of material for the closure of the wider river sections as well as correspondingly higher costs for the river diversion in contrary to the very limited additional water head from this section up to the Kyoga Lake, the Mbulamuti section is adopted as the most downstream feasible location.

Finally in the river reach of about 9km between the Simba Falls and Mbulamuti section, four alternative locations for the river closure (dam) have been identified. Due to very small river slope as well as very gentle morphology of the area, the alternatives with the separated location of the dam and powerhouse for the purpose of the creation of additional water head on turbines have not been considered. Furthermore it is considered that the power plant embedded in the dam structure is most probably the most economical option. This is supported by the generally good geological conditions that should provide for the foundation of such structure within the river bed.

Four identified alternative dam locations: D1, D2, D3, D4 that offer some advantages for the development of the HPP are given in the Figure Figure 3-1 below. More detailed position as well as the cross sections for each dam location are given in Annex 5 of the feasibility study for the development of isimba hydro-power plant and associated transmission line and sub-station, Volume II a, hydropower plant main report. The sites D1 to D4 are numbered from upstream towards downstream.

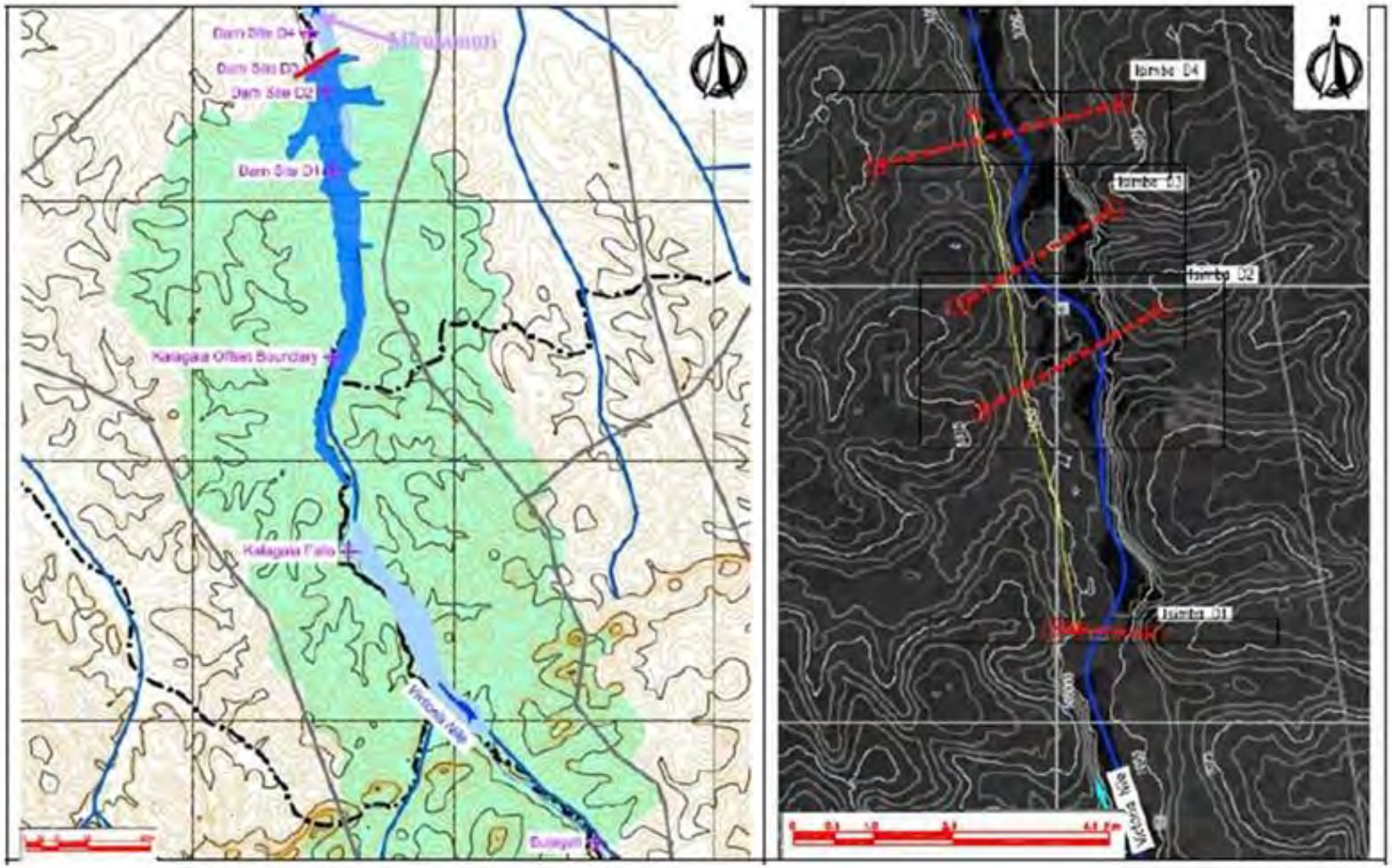


Figure 3-1: The four alternative dam locations: D1, D2, D3, D4

3.3 Ranking of Alternatives According to Individual Criteria

3.3.1 Geological Criteria

Anticipated suitability for the development of the hydro power project and construction of hydraulic structures at alternative dam site locations has been evaluated on basis of existing information and data/ observations made during site visits. For each issue/subject and alternative a score has been assigned according to the table below. Our general impression of the geology is that all dam sites are feasible from a geological point of view.

Table 3-1: *Ranking scores assigned to anticipated geological suitability/impacts*

-4	-3	-2	-1	0	1	2	3	4
Very large negative	Large negative	Moderate negative	Low negative	Insignificant	Low Positive	Moderate Positive	Large Positive	Very large positive

The main geological parameters of importance for the HPP development are then evaluated as follows. More details about the evaluation of the individual parameters and dam sites is given in **Annex 5**.

Table 3-2: *Anticipated magnitude and ranking of impacts at each site alternative*

Geological conditions	**Site**			
	D1	**D2**	**D3**	**D4**
Foundation conditions in river	2	2	3	2
Foundation conditions at left abutment	2	2	2	1
Foundation conditions at right abutment	2	2	1	2
Characteristic of basic geological features (consistent or variable)	2	1	2	2
Orientation and direction of basic geological features (suitable or not)	-1	1	1	1
Permeability characteristics	-1	-1	1	1
Rock availability as construction material	0	0	0	0
Width of river channel	1	-1	-1	-2
Availability of islands for coffering	2	1	2	1
Overall ranking	**9**	**7**	**11**	**6**

As it can be seen from the above table the general geological conditions at all four site are quite similar and any of the alternatives seems suitable for the development of HPP. Nevertheless, alternative site D3 is slightly better than the others. This is mainly due to the general impression of solid rock foundation in the river and at the abutments as well as due to the existence of consistent amphibolite with closed joints and no dominant direction of the structures in rock mass. In addition, since for all 4 sites the same rock quarry is assumed as the most suitable material source and there is general prevalence of the clay material in the area, there are no significant differences between the sites from this point of view.

Finally, in addition to the overall ranking of the alternatives, in order to be able to compare different criteria such as environmental, geological and power production or economic costs between each other, the achieved ranking has been converted into the ―scores‖. Score presents the performance of some alternative on a scale from 0 to 100% for selected criteria as discussed below.

3.3.2 Socio-environmental Criteria

Anticipated magnitude of impacts on human, biological and physical environment has been evaluated on basis of existing information and data/ observations made during site visits (including informal consultations with project affected people). For each issue/subject and alternative a score has been as shown in table below.

Table 3-3: *Ranking scores assigned to magnitude of impacts*

-4	-3	-2	-1	0	1	2	3	4
Very large negative	large negative	Moderate negative	Low negative	Insignificant	Low Positive	Moderate Positive	Large Positive	Very large positive

For each site, socio-environmental scoring is shown in table below.

Table 3-4: *Anticipated magnitude and ranking of impacts at each site alternative.*

Socio-environmental impact	**Site**			
	D1	**D2**	**D3**	**D4**
Land take	-2	-3	-3	-4
Impact on physical cultural resources/ cultural heritage	-1	-1	-1	-2
Terrestrial flora	-1	-1	-1	-1
Terrestrial fauna	-1	-1	-1	-1
Fish	-3	-2	-2	-1
Protected areas	0	0	0	0
Tourism impacts	-2	-2	-2	-2
Visual impact	-1	-1.5	-1.5	-2
Water quality	-1	-1.5	-1.5	-2
Erosion and landslide risk	-1	-1.5	-1.5	-2
Overall ranking	**-13**	**-14.5**	**-14.5**	**-17**

From impact ranking, it is apparent that site D4 has the most negative socio-environmental impact (score -17) and therefore least favourable. Based on ranking presented above, site D1 is most ideal dam location (score -13) ranking better than D2 and D3 which appear to equal magnitude of impacts.

3.3.3 Economic Evaluation

Based on the above given preliminary project dimensions and estimated total project costs at each alternative dam site location, preliminary economical parameters are obtained. For each parameter a score has been assigned according to the table below.

Table 3-5: *Ranking scores assigned to magnitude of impacts*

-4	-3	-2	-1	0	1	2	3	4
Very large negative	large negative	Moderate negative	Low negative	Insignificant	Low Positive	Moderate Positive	Large Positive	Very large positive

Based on the above ranking the parameters of importance for the power production and economic costs of the project are evaluated as follows.

Table 3-6: *Anticipated magnitude and ranking of impacts at each site alternative*

Power production and economic cost	**Site**			
	D1	**D2**	**D3**	**D4**
Hydrological input and reservoir area	-1	0	0	1
Annual power production	0	1	2	3
Total cost	0	-2	-1	-3

Generation cost / internal rate of return	2	0	3	1
Overall ranking	**1**	**-1**	**4**	**2**

As it can be seen the alternative D3 ranked the best according to the combined evaluation of power production and economic criteria. Although it does not provide the most energy, the ratio between the benefits from the power production and the costs in the development of the HPP is the best for this alternative.

Notwithstanding the above it has to be recognised, that the sole purpose of these analyses was comparison of the alternative dam locations between each other. Therefore, only the relative relationship between different alternatives is important. It is considered that the accuracy of the here used data is sufficient for the here done comparison. Nevertheless, above given preliminary values on power production and economic costs are subject to be changed during further course of the study.

3.4 Overall Evaluation of Alternative Dam Sites

3.4.1 General

In the following paragraphs the main findings about the identified dam site alternatives are summarized and final recommendation for the selection of one alternative site is made. This recommendation is based on the above given individual assessment of the performance of the each site alternatives that is in the following combined into an overall assessment using the the multi criteria evaluation techniques.

3.4.2 Analysis of the Alternative Dam Sites

Since all dam sites are located within some 5 km there is no significant differences between the sites according to the hydrological or sedimentation input. The main difference from this point of view is available water head. Nevertheless, since the differences in water head are relatively small, the capacity of each alternative in terms of energy production is mainly limited with the available river discharges.

In general there are no geological observations which strongly favour or disfavour any of the proposed dam axes. Except for distinct weakness-zones / faults, the rock mass is generally slightly weathered, and exposes sound and strong quality. Orientation of jointing relative to dam axes could differentiate on the permeability across dam axes for different localities, but it is premature to conclude on this based on the preliminary investigations. Nevertheless, the site D3 left slightly better impression than the other three sites.

From the environmental point of view the distinctions between the sites are also not very large. Nevertheless, the largest negative socio-environmental impacts are allocated to the site D4 and the smallest to the D1. Sites D2 and D3 ranged the same, in the middle between the previous two. This is mainly based on the extent of the inundated area and corresponding effects on the environmental and socio impacts. As far as the flora and fauna are concerned as well as cultural and heritage values no major problem for the development of the HPP at any of the sites are identified.

Finally, the alternative sites have been compared in terms of the power production possibilities and economic costs. For the identification of the available head for power production, maximum reservoir elevation and the same maximum discharge as for Bujagali HPP were assumed.

Due to the highest available head the alternative D4 ranked as the best in terms of overall power production. On the other side, quite wide river cross section at this site reflected in relatively high economic costs that largely hindered

this alternative. In terms of the specific beneficial value considering the possibly obtained benefits in comparison to the invested costs, the alternative D3 preformed the best. This alternative provides more power production then the alternatives D1 and D2 with comparatively smaller additional investment costs.

As it can be seen from above alternative D3 scores the best in two of three predefined criteria, namely power production/economic costs and geological/morphological.

3.4.3 Identification of Alternative Reservoir Elevations

Considering the above illustrated interference following three alternative solutions for the reservoir levels are identified:

1. Reservoir restricted up to the first rapid downstream of Kalagala Falls (Level at 1055 masl)
2. Reservoir restricted up to the northern border of the Nile Bank Central Forest Reserve (Level at 1048 masl)
3. Reservoir restricted up to the northern border of Kalagala Offset Area (Level at 1043 masl)

Each of the above alternatives is graphically presented in *Figure 8-3.* It is to be noted that here given levels are the maximum reservoir levels for the maximum probable flood. Furthermore, none of the alternatives endangers the high environmental and socio value of the Kalagala Falls as well as its potential for possible further development of the hydro power.

Figure 3-2: *Reservoir level alternatives*

As already said, with Alternative 1 the reservoir would be limited to the first rapids downstream of the Kalagala Falls that is about 2 km downstream from the Kalagala Falls itself. This corresponds to the existing power development documentation. With Alternative 2 the reservoir would be restricted up to the northern border of the Nile Bank Central Forest Reserve The boundaries of the Nile Bank CFR are defined on Page 29 of the Kalagala Offset Sustainable Management Plan (2010-2019) as at 0°35‘ and 0°40‘ North and 33°00‘ and 33°02‘ East. Therefore the reservoir ends about 7 km downstream airline of the Kalagala Falls.

With Alternative 3 the reservoir would be restricted up to the northern border of Kalagala Offset Area as approximately given in the Map of the Kalagala Offset Area from the Indemnity Agreement. The reservoir ends about 10 km downstream airline of the Kalagala Falls. In the following, the feasibility in terms of power production, economic viability and socio-environmental impacts of the above identified alternatives will be given. Having in mind that the techno-economical evaluation of any alternative have to be done for a very specific costs, such as costs of land acquisition, equipment costs, construction costs, and that the socio and environmental impacts request for even

more complex evaluation of the impacts at the site, the aim and scope of the work here was restricted as to provide for the relative comparison among identified alternatives. These evaluations are based on the available data as well as on the Consultants experience from other similar project but are not meant to be used for any other purpose than above stated.

3.5 Results of the Evaluation of Alternative Reservoir Levels (1, 2 and 3)

3.5.1 Economic Analysis

Based on the evaluation of potential reservoir level alternatives according to the technical, socio -economic and environmental criteria, an overall assessment of the best compromise solution is made in the following. Firstly an economic evaluation of the alternatives based on the evaluation of all projects costs and benefits reduced to the net present value is done and one alternative is recommended. In order to include the environmental and social impacts into this analysis , where possible, monetary values are assigned to the impacts as well. The results of the calculations are shown in the tables below. Table 3-7 shows the results of the evaluation where the alternative generation is assumed to be thermal generation based on imported fuel (HFO) while Table 3-8 shows the results of the evaluation where the alternative generation is assumed to be hydropower.

Table 3-7: Results of the economic evaluation (alternative generation based on imported fuel)

	Alt 2 versus Alt 3	Alt 1 versus Alt 2	Alt 1 versus Alt 3
NPV (10%) USD million	267	398	680
EIRR	43.5	45.5	44.9
Benefit/Cost ratio (10%)	3	3.5	3.5

In the case where lost generation from a smaller development of Isimba HPP is compared to thermal generation based on imported fuel (HFO) Alternative 2 gives far better economic merits than Alternative 3. The net present value (NPV) is USD 267 million (at 10 % discount rate) and the economic internal rate of return (EIRR) is 43.5 %.The benefit-cost ratio is calculated to be 3.0.

Alternative 1 gives also far better economic merits than Alternative 2, as the value of increased power generation outweighs the costs in form of increased investments and lost income from tourism. The net present value is in this case calculated to USD 398 million (at 10 % discount rate) and the economic internal rate of return to 45.5 %.The benefit-cost ratio is calculated to be 3.5.

When comparing Alternative 1 to Alternative 3 the net present value is USD 680 million (at 10 % discount rate) and the economic internal rate of return almost 45 %.The benefit-cost ratio is calculated to be 3.5.

Table 3-8: Results of the economic evaluation (alternative hydropower generation)

	Alt 2 versus Alt 3	Alt 1 versus Alt 2	Alt 1 versus Alt 3
NPV (10%) USD million	28	62	106
EIRR	16.1	19.3	18.7
Benefit/Cost ratio (10%)	1.2	1.4	1.3

Also in the case where lost generation from a smaller development of Isimba HPP is compared to alternative hydropower generation has Alternative 2 better economic merits than Alternative 3. The net present value is in this case calculated to USD 28 million (at 10 % discount rate) and the economic internal rate of return to 16 %.The benefit-cost ratio is calculated to be 1.2.

When comparing Alternative 1 to Alternative 2, the higher power generation more than outweighs the costs in form of higher investment costs and lost income from tourism. The net present value is in this case USD 62 million (at 10 % discount rate) and the economic internal rate of return 19 %.The benefit-cost ratio is calculated to be 1.4.
When comparing Alternative 1 to Alternative 3 the much higher power generation more than pays for the increased costs of Alternative 1. The net present value is in this case USD 106 million (at 10 % discount rate) and the economic internal rate of return almost 19 %.The benefit-cost ratio is calculated to be 1.3. Based on economic evaluation Alternative 1 is a better choice for development than Alternative 2 and Alternative 3.

Environmental criteria

As next criteria the environmental impacts are evaluated as well. Only the impacts in which important differences are identified in the previous chapter are analysed here. The results are summarized in the table below. Important to note is that only the parameters for which an important difference in impacts of the reservoir alternatives has been previously identified are selected and evaluated here.

Table 3-9: Environmental evaluation of alternative reservoir elevations

Socio-environmental impact	**Site**		
	Alternative 1	**Alternative 2**	**Alternative 3**
Landscape / visual impact	-2	-1	0
Terrestrial flora and fauna	-1	-1	0
Fish and bird species	-1	0	0
Protected areas	-2	-1	0
Overall ranking	**-6**	**-3**	**0**

As it can be seen, according to the environmental criteria Alternative 3 clearly prevails the other two. This is to be expected due to its much smaller reservoir and inundation area. Nevertheless, it is important to note that there were no environmental factors identified that would exclude any of the alternatives.

Socio-economic criteria

The evaluation of the annual energy generation, investment costs, costs of alternative energy production as well as costs of displaced households, loss of land and loss of tourism income have been brought here to a common numerical values (using ranking method). These are presented in the following table.

Table 3-10: Socio-economic evaluation of alternative reservoir elevations

Socio-environmental impact	**Site**		
	Alternative 1	**Alternative 2**	**Alternative 3**
Annual energy generation	4	0	-4
Investment cost	-2	-1	0
Cost of alternative energy generation	4	0	-4
Cost of displaced households	-3	-2	-1
Cost of land take	-3	-2	-1
Loss of tourism revenue	-3	-2	0
Fisheries	2	1	0
Overall ranking	**-1**	**-6**	**-10**

It can be seen that in overall performance Alternative 1 still prevail over Alternatives 2 and 3. This is simply due to the important benefits of the energy production and prevention of currently high costs on alternative energy generation.

In comparison with the loss of land for households, agriculture and tourism income on the national scale the above two are still much more important. It can be concluded that in the weighted score Alternative 1 scores highest and is be preferred option.

3.6 No project scenario

It is known that power to be generated by Isimba hydropower Dam would considerably increase the nation's installed capacity of a renewable and cheaper to generate energy supply. Without this project, up to 200 MW of electrical supply would be forfeited on the national grid. This would certainly mean longer than planned reliance on expensive emergency thermal power plants and increased load shedding with significant adverse effect on poverty reduction and socio-economic development. Thermal power is not only costly but also has negative environmental impacts including air pollution, noise, potential for spills and emission of greenhouse gases, chiefly Carbondioxide. There are other possible options such as wind, solar, biomass, mini and micro dams, geothermal and power generation with newly discovered oil and gas reserves in the Albertine Graben.

3.7 Need and rationale for Isimba HPP

Isimba HPP is in line with Uganda Government's continued pursuit for sufficient power supply to match present and foreseeable future national demand. Over the last three decades, Uganda has experienced power shortage, with considerable adverse impact on national economy and environmental conservation such as resulting from extensive use of biomass. More recently (early 2000s), government adopted generation of power from diesel and HFO thermal power plants as a short-term measure to abate load shedding but these are associated high fuel cost and gaseous emissions.

Depending on national economic growth rate and the type of industries that will be set up, power needs in two years will be between 10% and 12% or 100 MW more than today's demand. This translates to about 550 MW that will be required in the next two year. The demand for power stands at about 50 MW each year. Uganda's installed power capacity is 600 MW (as of August 2012). However the actual power generated is 380 MW yet the power demand is 450 MW. If the country installs 800 MW in two years the power generation will be around 600 MW.

The increase in electricity demand has been largely driven by growth in economic activities in the country whereas supply has remained constrained due to hydrological constraints[6].

Uganda's access to grid electricity is low with majority of the population depending on traditional biomass energy. Only a small proportion of the population has access to grid electricity supply. Since 1999 a number of projects have been initiated to improve Uganda power supply and increase access to electricity. Many of them are being developed by the private sector. Bujagali hydro-power project has been fully commissioned to add 250 MW to the national grid. There are also hydro-electric projects like Isimba, Karuma, Ayago North and Ayago South. The West Nile Rural electrification company is providing thermal electricity supply to Arua and Nebbi districts. The firm has also constructed and commissioned 3.5 MW Nyagak power plant to supply power to West Nile region .Japan will construct small hydro-power projects in Uganda, especially in rural areas but is also investing in larger hydro-power projects, like the 600 MW Karuma hydro-power plant which is at tendering stage and 50 MW hydro -power station on River Muzizi. Other companies that are executing power projects are Hydromax (10 MW at Buseruka, Hoima) and plans to distribute power to Hoima, Masindi and Kibaale and Kilembe Investment, which has invested in the distribution of power in Kasese and north-western Bushenyi.

---

6 Electricity Regulatory Authority (ERA) Newsletter Issue 6, December 2011.

Mount Elgon Power Company is developing a 12 MW power plant from five sites in Mount Elgon ranges so that electrical power can be added onto the national grid. The Norwegian Power Group (SN Power Invest AS, Alston and Norplan) is planning to develop four power plants of up to 4 MW at Waki, Muzizi, Nengo Bridge and Mubuku.

Tronder Power is operating 13 MW Bugoye hydro-power plant in Kasese. Kasese Cobalt Company is operating the 10 MW Mubuku hydro plant, while Kilembe Mines is also operating the 5.6 MW hydro-power plant in Kasese. Other firms include Eco Power for the Ishasha hydro-site and China Shang Sheng International for the Kikagati hydro-site. With more investment in power industry by the private sector and Government, Uganda will have 800 MW installed in 2014. This includes the 280 MW from Kiira and Nalubaale power dams and the 250 MW Bujagali HPP in Jinja.

4 METHODOLOGY

This chapter describes the broad principles of methodology and scope of the SIA indicating the approach that was used to identify, evaluate and recommend mitigation measures for social impacts. The SIA survey tools sought to identify social economic activities within the flood area, identify disadvantaged people such as women, elderly people, terminally ill and those at risk (for example the Bibanja owners, squatters, and landless) and described their social and cultural characteristics. This information was incorporated into the SIA and baseline data. Field surveys were conducted including consultations, and the analyses have been utilized in this SIA report. This has led to impact analyses and recommendation of mitigation actions.

In order to adequately assess the social impacts resulting from the development of Isimba Hydro power dam, both qualitative and quantitative social assessment methods were used. Data collection was undertaken at the household level as well as communities/settlements and other relevant social aggregations. The techniques that were used in data collection include:

- Ugandan Government development documents, guiding reports and policies; ▪
Secondary data collection at local, district and national levels;
- Representative sampling;
- Structured and semi-structured questionnaires;
- Key informant interviews;
- Participant observations;
- Case study reviews; and
- Focus group discussions.

The above social assessment methods, were important in showing survey data accuracy and varying vulnerability of PAPs.

4.1 Literature Review and Secondary Data

This involved reviewing historical and current studies and census data, social economic status, patterns of asset ownership, livelihoods, community structure, landuse, and infrastructure and service profile of the flood area. This resulted in the socioeconomic contributions to the previously submitted —Scoping Reportll as well as continued secondary data gathering into this report.

As part of the literature review relevant to this study, a review of national legislations, regulations and World Bank policies was also undertaken. During the review, particular attention was paid to the laws and regulations and donor policies governing the Project's implementation and access for the poor and vulnerable groups to goods, services and opportunities provided by the Project.

4.2 Stakeholder Identification and Consultation

Consultation with key stakeholders is a continuous process that was carried out throughout the SIA process; it is the intention of UEGCL to continue with it during the construction and operation phases of the project. During the study, stakeholder analysis exercise was undertaken to identify Interested and Affected Parties (I&APs) to the project.

Public consultation was critical in assisting the team to understand the local conditions and highlighting the socio-economic and environmental concerns/impacts and feasible mitigation measures. The consultant formally informed District local government administrations within the flood area in writing about of the Project and associated feasibility studies. Consultation meetings were then held with these leaders in each District (minutes attached in Appendix B). More so a workshop (**Plate 4-1**) was held on the 13th December 2012 at Crested Crane Hotel in Jinja District where all major stakeholders were invited. The stakeholders groups who were invited include organisations with direct

interest in the development of the project (central and local government), public and private sector organisations, tourism agencies and the public (Plate 4-1).

Plate 4-1: Stakeholder Workshop held at Crested Crane Hotel in Jinja District

Table 4-1: Stakeholder groups

Central and Local Government	Professionals Organizations	Tourism Agency	Public
Organizations with a direct interest in Isimba HPP and/or that are able to provide support	Public and private sector organizations including NGO and private voluntary organization	Tourism agencies involved in tourism activities within the flood area	Individuals in the flood area representing themselves rather than organized groups
• District officials in Kayunga • District Officials in Kamuli • Distrit officials in Jinja • Ministry of Gender Labour and Social Development • Ministry of Energy & Mineral Development (MEMD) • National Forestry Authority (NFA) • Uganda Electricity Generation Company Limited (UEGCL) • Uganda Electricity Transmission Company Limited (UETCL) • Rural Electrification Authority (REA)	• Axillary Foundation	• Uganda Tourism Board • Kayak The Nile (U) Ltd • Nile Rivers Explorers • Nalubale Rafting • Hairy Lemon	• Fishermen • Farmer groups • Women farmers • Youth • Community leaders • Communities

Consultations engaged PAP's through wider community meetings (Plate 4-2) held in each village to sensitize people about the project, its potential benefits and negative impacts. In these meetings, questions or queries from PAP's were discussed and uncertainties clarified. Meetings were held at both Kayunga and Kamuli districts in villages affected. A brochure (attached in Appendix C) containing a summary of the Project was developed and utilized in community consultations and stakeholder engagement. Different groups of stakeholders were consulted and these include fish mongers, women groups and individual persons. The main aim of consulting them was find out social economic impacts related to health, economy and environment of the people living within the flood area.

Additional clarification meetings, wherever requested by communities, were held either to provide information to PAP's who missed earlier sessions or clarify aspects (especially on land take, compensation and resettlement) of the project that were not properly understood. For example, such additional meetings were held in Kiteredde village in Kayunga District during household surveys with PAPs. Using contact address information on the project brochure, affected people occasionally visited the consultant's office or called by telephone or email correspondence to seek additional information. Community meetings (Plate 4-2) were attended by a broad spectrum of residents including women, elderly people and youths. Especially for PAPs, there was opportunity (during household surveys) to clarify issues that were not clear in general community meetings. A record of consultations is presented in Annex B.

Plate 4-2: Consultation meetings in Budooda and Kasega villages

4.3 Field Surveys

Upon the completion of a comprehensive literature review, a household survey was undertaken with the aim of conducting interviews with the communities and stakeholders identified and to undertake a groundtruthing of the information collected from secondary literature. The household survey methods including a two-stage sampling design was adopted. The first stage was the random selection of sample villages within the project area while the second and ultimate stage was the selection of the households' sample. The boundaries of each village were identified by the enumerators together with the community leaders. For each selected village a list of corresponding households was compiled with help of community leaders a day before the surveys. The interviewed households were randomly selected from the compiled list basing on an array of random numbers.

Since the Project could also have wider community impacts, such as creation of construction jobs and potential impacts resulting from land acquisition and structure relocation, it was also important to understand what community perspectives were associated with the Project. To gather this information, a census questionnaire which was answered by all the PAPs was designed to cover both household and community characteristics as well as socio economic surveys of owners/ users of the affected land or structure.

4.3.1 Conceptual Design

This SIA survey gathered community baseline information and initiated a process of dialogue with stakeholders. To understand likely social impacts of a large project of this scale, it was important to collect views of households and stakeholders in communities to be affected. In particular, it was important to collect information relating to the following issues:

- What households and stakeholders within the flood area knew and did not know about the Project and sources of their information
- How important they thought the project was
- What benefits they hoped it might bring
- What negative effects concerned them
- What suggestions they had about increasing positive benefits and ▪

What suggestions they had for reducing negative effects

Since the Project could also have wider community impacts, such as creation of construction jobs and potential impacts resulting from land acquisition and structure relocation, it was also important to understand what community perspectives were associated with the Project. To gather this information, a SIA socio-economic survey questionnaire (Annex A) besides the census questionnaire was used to cover households and community characteristics. These questionnaires were:

- SIA socio-economic survey of owners/users of affected land
- 100% Census of those impacted by involuntary land acquisition and resettlement (in accordance with Ugandan and World Bank definitions)

4.4 Data processing and analysis

Every evening on a survey day, the team held a data quality control session in which all unclear responses in the instrument were discussed by the rest of the team. The collected HH data was transported to Kampala on a weekly basis to develop an SPSS database. A data entry form designed in Epi Info package was developed and used as the template. The designed form was especially important for taking care of the skip patterns within the instrument. The entered data was exported from Epi Info to SPSS for improvement and quality checks. During database cleaning, trial runs for variables' descriptive, frequencies and cross-tabulations were used to identify inconsistent information that would be double checked and rectified. Routine examinations of these trial runs' outputs were undertaken to uncover dirty data. The data entry team sought any clarifications with the field team whenever necessary.

4.4.1 Questionnaire Design

The SIA questionnaire was designed to have a household section and community characteristics section (Annex A). The household section had three modules covering: a) information about the project; b) household characteristics and c) living standards

The community characteristics section had five modules covering:

- basic demography
- village/community economy
- education, culture and local politics
- health and healthcare services and
- natural environment

Plate 4-3: Household interviews in Kayunga District

4.4.2 Venue of Interviews

Household interviews were conducted in homes of interviewees where interviewers also observed housing and living conditions. At the end of the questionnaire, the affected person was asked to sign on his or her questionnaire and a photograph was taken to show proof of the rightful owner. PAPs that were not available at that time were represented by either a spouse or their children.

Community characteristics interviews took place in homes or work places with local leaders, church or a school teacher-someone knowledgeable on community set and development characteristics.

4.4.3 Sampling and Sample Design

Census questionnaire was administered to 100% of all project-affected persons (PAPs) likely to be affected by land acquisition and resettlement as a result of the Project. Some PAPs were not interviewed because they were not present at the time of the survey and efforts to trace their contacts were not possible as some of them own properties while not staying there. However the LC chair persons were requested to assist in tracing their contacts and give to the consultant before project implementation. Further the consultant/ surveyor will have to return to these areas to update their lists before the report is handed over to the chief government valuer.

Socio-economic questionnaire for people losing land was administered to a sample of about 30% of all PAPs. In order not to have bias, a household survey methods including a two-stage sampling design was adopted. The first stage was the random selection of sample villages within the project area while the second and ultimate stage was the selection of the households' sample. The boundaries of each village were identified by the enumerators together with the community leaders. For each selected village a list of households was compiled with help of community leaders a day before the surveys. The interviewed HHs were randomly selected from the compiled list basing on an array of random numbers.

a) General Guidelines

General guidelines were developed and followed by the survey teams. In particular, interviewers were keen to:

- explain clearly the purpose of the questionnaire
- be patient, socially and culturally respectful towards local people
- make phrasing as simple and easily understandable as possible, to illiterate people in particular

b) Data Reliability

Data collected in this SIA was checked during data collection and data entry. It was expected that what people said about themselves, the Project and development prospects for their communities, was accurate. However, broader questions about possible bias and reliability were addressed as below:

- **Anticipated Sources of Bias and Remedies** - Reliability of information collected depended primarily on ethnic and gender composition of household samples interviewed and effort was made to ensure samples were representative of the overall populations of communities within the flood area, from which they were drawn.

  Care was taken to ensure that samples in individual districts are closely representative of ethnic composition of the overall populations in the flood area, especially ensuring that women are not underrepresented.

  Another potential source of bias is the time of day when interviews were conducted. In rural areas people are often busy during daylight hours; the people at home during this time are often pre-school

children, unemployed dependants, or elderly persons. To offset these problems, the survey teams held rural interviews during lunch hours when possible, and urban interviews in early evenings and on weekends. During sensitization sessions in areas likely to be flooded, people were advised to convey the message that a knowledgeable person should be left behind to meet with surveyors/ valuers and social team. The SIA survey investigated if characteristics and opinions of households to be directly affected were significantly different from those reported by a community outside the area of influence.

- **Role of Local Leaders** - Local leaders (LC chairpersons) played an important role in community mobilization and facilitating access of the survey teams to communities in which households were to be interviewed and in some cases acted as interpreters.
- **Identification of PAP's** - Social survey teams moved alongside cadastral surveyors and property valuers to ensure both groups correctly identify affected households and that data collected would complement each other ensuring additional donor requirements would be covered as much as possible.

4.4.4 Focus Groups

Focus group discussions (Plate 4-4) were organized with various groups of people and stakeholders in the Project affected areas. Participants in these discussions included local population, women groups, fish mongers, local leaders and elders, community development leaders and District officials. The discussions with the community elucidated the current development potential to be affected by the Project, before, during and post-construction stages. Attitudes towards social benefits, risks involved during construction and operation, resettlement, compensation and land takes were also discussed.

Plate 4-4: Focus group discussion with fishermen (left) and a group of women (right)

4.4.5 Participant Observation and Photographic Records

During field surveys, information obtained through household surveys, interviews and focus group meetings was corroborated through direct observation by the study team. Observation was specifically aimed at assessing physical assets of people in affected areas, living conditions, settlement patterns, and households' capacity to diversify income, social and economic networks. Where possible, observations were backed up by photographic records.

5 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section provides the legislative, regulatory, and policy context in which the proposed Isimba Hydropower project should comply. National regulations are discussed along with relevant international agreements and conventions to which, Uganda is a party. Key legislations governing the conduct of EIA/SIA in Uganda are the National Environmental Act (Cap 153) and the Environmental Impact Assessment Regulations (1998). The National Environmental Act established the National Environment Management Authority (NEMA), and entrusts it with responsibility to ensure compliance with the EIA/SIA process in planning and execution of infrastructural projects. Relevant policies have also been reviewed and the relevance highlighted as in subsequent sections below.

5.1 POLICY FRAMEWORK

5.1.1 National Environment Management Policy (1994)

The overall goal of this policy is promotion of sustainable economic and social development, being mindful of the needs of future generations. ESIA is one of the vital tools it considers necessary to ensure environmental quality and resource productivity on long-term basis. The policy calls for integration of environmental concerns into development policies, plans and projects at national, district and local levels. Hence, the policy requires that projects likely to have significant adverse ecological or social impacts undertake socio-environmental assessment before their implementation. This is also reaffirmed in the National Environment Act (Cap 153) that makes socio-environmental assessment a legal requirement for —Third Schedulell projects.

Isimba Dam Project is a —*Third Schedule*ll project, hence necessitating a socio-environmental assessment before its implementation. Broadly the policy requires projects with potential to cause social impacts such as: *economic benefits, employment, community skills development, improved standard of living, alternative livelihood, improvement of living conditions for women, economic exposure and development, cultural change or domestic water pollution,*
etc, to undertake impact assessment and develop mitigation or enhancement recommendations and actions.

Interpretation: This social assessment for proposed Isimba HPP project is in compliance with requirements of this policy.

5.1.2 The Energy Policy (2002)

The policy goal is to meet energy needs of Uganda‘s population for social and economic development in an environmentally sustainable manner. The policy recognizes linkages between the energy sector and other sectors such as economy, environment, water resources, agriculture, forestry, industry, health, transport, education, decentralization and land use. Hence at the sectoral level, the policy strengthens provisions of the National Environmental Management Policy, 1994 that emphasizes need for an environmental and social impact assessment. This policy recognizes the energy sector as potentially having more significant environmental and social impacts than most other economic sectors. Since energy development and environmental damage are related, the policy recognizes need to mitigate both physical and social environmental impacts of energy projects.

Specifically, the energy sector is to meet the following broad objectives:

- To establish availability, potential and demand of various energy resources ▪ To increase access to modern, affordable and reliable energy services ▪ To stimulate economic development
- To manage energy-related environmental impacts

In pursuit of these objectives, Uganda government has now in its priority development of the sector, invested in constructing Isimba HPP and associated transmission infrastructure. Hence, when developing energy infrastructure such as designing the proposed Isimba dam Project for implementation, the Government has committed itself to ensuring that socio-environmental issues are given priority consideration through the Environmental and Social Impact Assessment.

Interpretation: The Project is consistent with this policy in so far as it seeks to increase access to hydro-electricity, a source of renewable energy; and socio-environmental assessment has been conducted prior to implementation as required.

5.1.3 National Development Plan (2010)

In February 2010, the Government of Uganda finalized a new 5-year National Development Plan (NDP) spanning 2011-2015 and this took from achievements of the Poverty Eradication Action Plan (PEAP) which was implemented up to 2008. The NDP's main theme is *—Growth, Employment and Socio-Economic Transformation for Prosperity*,ll marking a broadening of the country's development strategy from poverty reduction to structural transformation with the aim to raise growth and living standards. The NDP is the first in a series of six plans intended to transform Uganda over 30 years into a modern and prosperous nation.

Based on economic forecasts, GDP growth rate over the National Development Plan (NDP) period is projected at an average of 7.2 per cent per annum. At this GDP growth rate, nominal per capita income is projected to increase from USD 506 in 2008/09 to about USD 850 by 2014/15. During the same period, the proportion of people living below the poverty line is expected to decline from the level of 31 % in 2005/06 to about 24.5 % in 2014/2015, above the MDG target of 28 %. The NDP also addresses structural bottlenecks in the economy in order to accelerate socio-economic transformation for prosperity and key among these is low access to grid electricity which government plans to reduce by increasing expansion of the national transmission grid. Indeed Isimba dam Project and associated substation will contribute to implementation of the Plan, increasing power available to the Ugandan people, leading to improved economic development.

The NDP recognises that limited access and use of energy significantly slows down economic and social transformation. The low energy consumption per capita in Uganda has largely contributed to the slow economic transformation by limiting industrialisation as well as value addition. It is one major factor that impacted on the country's competitiveness over the last decade. The energy exploitation and consumption patterns reflect that the country is still in infancy stages of energy application in production processes. The exploitation pattern is such that biomass accounts for 92% of total energy consumed while fossil fuels account for 7% and electricity only 1%. To improve this situation, NDP devised two strategies below:

Strategy 1 *(see NDP Sec 393, p153):* Construct large hydropower plants and thermal power plants through public and private investments.

i) Complete Bujagali hydropower dam construction. This is expected to increase power generation capacity by 250 MW.
ii) Construct Karuma hydropower plant to generate 700 MW.
iii) Study, design and construct Ayago hydropower plant to generate 700 MW. iv) Study, design and construct Arianga hydropower plant to generate 400 MW.
v) Construct Isimba hydropower dam.
vi) Build a thermal power Plant (700 MW as part of the refinery) to utilize Uganda's oil resources. vii) Design and construct solar thermal plants to generate 200 MW.
viii) Study, design and build geothermal plants to generate 100 MW.
ix) Increase the co-generation capacity to 150 MW from wood, waste crop and garbage.

The Project is consistent with the NDP's Strategy 1 to enhance economic and social transformation. Thus contribute to implementation of the Plan, increasing power available to the Ugandan people, leading to improved economic development.

Interpretation: The Project is consistent with the NDP"s Strategy 1 to enhance economic and social transformation.

5.1.4 National Gender Policy (1997)

The overall goal of this policy is to mainstream gender concerns in the national development process in order to improve the social, legal/civic, political, economic and cultural conditions of the people of Uganda , particularly women. Thus, in the context of the power sector, this policy aims to redress the imbalances which arise from the existing gender inequalities and promotes the participation of both women and men in all stages of the project cycle, equal access to, and control over significant economic resources and benefits.

Interpretation: This policy will apply to recruitment of construction labor where women are expected to have equal opportunity as men for available jobs. This policy also requires provision of a work environment that is conducive to women as well as for men in addition to gender-disaggregated impacts and vulnerabilities. For example onsite worker"s sanitation facilities for women should be separate from men"s and this applies to other gender-sensitive facilities and or even roles.

5.1.5 HIV/AIDS Policy 1992

In Uganda current effort to combat HIV/AIDS is characterized by a policy of openness by Government and this has, to a large extent, been emulated by civil society, political and social institutions, and households. HIV/AIDS in the context of national development planning is attended to through NDP and Vision 2025. Main streaming HIV/AIDS prevention in all programs including infrastructure projects is an important aspect of a national overarching policy.

HIV/AIDS is recognized by Ministry of Health as a considerable risk in construction of infrastructure projects and it (together with the Ministry responsible for labor) encourages employers to develop in-house HIV/AIDS policies, provide awareness and prevention measures to workers and avoid discriminating against employees or applicants living with or affected by HIV/AIDS. To ensure HIV/AIDS is addressed in the work place, the policy encourages awareness and education training on HIV/AIDS for employees. To protect the infected and affected persons from discrimination, employers are required to keep personal medical records confidential. Employees living with, or affected by HIV and AIDS, and those who have any related concerns, are encouraged to contact any confidant within the organization to discuss their concerns and obtain information.

Interpretation: The requirements of this policy are expected to be fulfilled by Isimba HPP construction contractors or their subcontractors, especially in regard to having an in-house HIV Policy, worker sensitisation and provision of free condoms. This policy is relevant to the project if implementation of proposed Isimba dam construction leads to inmigration into the project area by people seeking construction jobs and indulging in prostitution or irresponsible sexual fraternisation associated with HIV/AIDS risk. Effective HIV/AIDS management in the workplace starts with the contractor. It is thus important for the contractor to have an HIV/AIDS policy.

5.1.6 Uganda Resettlement/Land Acquisition Policy Framework (2002)

With regard to compensation and resettlement issues, the main pieces of legislation are the Constitution of Republic of Uganda/and the Land Act both of which require that:

- Compensation should be aimed at minimizing social disruption and assist those who have lost assets as a result of dam project to maintain their livelihoods. In accordance with Ugandan laws and standards, a disturbance allowance is to be provided to assist the Project affected individual or family to cover costs of

moving and locating to a new holding. This disturbance allowance however might not be sufficient to cover income losses.

- Community infrastructure must be replaced and ideally be improved in situations where it was deficient. This includes installation of sanitary facilities, electricity generation systems, road links and provision of water.

Interpretation: These aspects will be complied with, as guided by the Project"s separate Resettlement Action Plan.

5.1.7 Master Plan Study on Hydropower Development in Uganda, 2010

The ―Hydro Power Master Plan‖ from December 2010 presented an integrated hydropower development of Victoria Nile River and other small rivers like R. Muzizi. Based on the estimated daily load pattern with peak demand in the evening hours and no significant variations on weekly and monthly basis, daily peaking power production is allocated to the power plants on the upper reach of Victoria Nile (up to Kyoga Lake). This was mainly due to the natural regulating effect of the Kyoga Lake for the peaking operation discharges from the upstream projects.

The study included prioritization of potential hydropower sites based on consideration of technical, environmental, economic and financial aspects for the development in the period of 15 years as well as the optimal scale, basic layout and the framework of development. The study also aimed at implementation of necessary power supply plan that would support economic growth in the Republic of Uganda as well as the East African region.

Interpretation: Development of Isimba HPP is in line with recommendations of this Master Plan.

5.1.8 Uganda's Vision 2040

In ‗Vision 2040' Ugandan sets goals to achieve by the year 2040 ranging from political, economic, social, energy, and environment. With respect to environmental goals, Ugandans aspired to have sustainable social-economic development that ensures environmental quality and preservation of the ecosystem. Vision 2040 recognises energy as a key driver of the economic development and notes that for Uganda to shift from a peasantry to an industrialized and urban society, it must be propelled by electricity as a form of modern energy. It estimates that Uganda will require 41,738 MW of electricity by year 2040 thus increasing its electricity consumption per capita to 3,668 kWh. Furthermore the access to the national grid must significantly increase to 80%. To this end, Uganda will fully exploit its hydropower potential by developing large and small Hydropower plants including Isimba, Murchison Bay, Karuma, Kalagala, and Muzizi inclusive besides other renewables such as wind, solar and bio-gas. To reduce the energy deficit, in the long-term Government will invest in development of nuclear power from uranium deposits in the country. Vision 2040 notes that to improve access and availability of electricity to the rural and urban areas, especially to economic zones and other productive areas, new transmission lines to evacuate power will be built and rural electrification programmes accelerated.

Interpretation: The proposed Isimba Hydro Power dam is in line with aspirations of Vision 2040.

5.1.9 Renewable Energy Policy, 2007

The overall objective of the Renewable Energy Policy is to diversify energy supply sources and technologies in Uganda. In particular, the policy goal is to increase the use of renewable energy from 4% (in 2007) to 61% of the total energy consumption by 2017 and the largest proportion of this will evidently be contributed by hydropower stations. Additionally, in January 2011, announced one of the most sophisticated, Feed-in Tariff Program in Africa. A feed-in tariff is a policy mechanism designed to accelerate investment in renewable energy technologies by offering long - term contracts to renewable energy producers based on the cost of generation of each technology. The national feed-in tariffs aimed to offer cost-based compensation to renewable energy producers, providing price certainty and long-term contracts that help finance renewable energy investments. The Uganda program specifies capacity caps

for each renewable energy technology by year and this provides clear policy guidance on how much the country wants of which renewable technology.

Interpretation: Hydropower is Uganda most prevalent renewable energy resource and increasing its play in the nation"s energy mix, as would be achieved by development of proposed Isimba HPP, is in agreement with this Policy.

5.1.10 The Fisheries Policy, 2004

Policy Area No. 8 (—The environment and fisheriesll) seeks to ensure that adverse environmental impacts on fisheries are minimized including pollution of watercourses by industrial and infrastructural development.

Interpretation: River Nile has been identified to be a prolific habit for fisheries and this policy is relevant to the project since a dam across the river can influence changes in fisheries resources and species diversity both upstream and downstream of the dam.

5.2 LEGAL FRAMEWORK AND STANDARDS

It is expected that there will be both major and minor social impacts, resulting from implementation of Isimba Project. Most relevant Laws and Acts relating to this Project specifically make reference to involuntary land acquisition and resettlement impacts, with one relating to cultural issues. These Ugandan laws are discussed below.

5.2.1 Electricity Act, Cap 145

Enactment of the Electricity Act, 1999 paved way for liberalisation of Uganda's energy sector, allowing the establishment and operations of independent power producers. This Act liberalized the power sector breaking up Uganda Electricity Board that had monopoly for power generation, transmission and distribution, into three companies responsible for generation (UEGCL), transmission (UETCL) and distribution (UEDCL) of electric power in Uganda. The Act also authorised licensing of independent power producers (IPP), to generate, distribute and sell power. This Act created the Electricity Regulatory Authority (—the Authorityll in this Act), an independent body responsible for regulating the electricity sector in Uganda and licensing private investors. The Authority retains power to award licenses for power generation; promote efficiency, economy and safety on the part of licensees and the efficient and safe use of electricity. This ensures that the design and operation of generation, transmission and distribution by licensees will have efficiency built in and approved standards.

Section 29(2)(f) and Section 33(1)(g) require that any entity desirous of securing a license to establish a power generation facility provides reports of studies undertaken to assess impact of the project on electricity supply, socioeconomics, cultural heritage, environment, natural resources and wildlife.

Section 68 of the Act provides guidelines for the placement of electricity supply lines on land, stating that a developer shall as much as possible minimise damage to the environment and shall ensure prompt payment of fair and adequate compensation to all interested persons for any damage or loss sustained by construction of electricity supply infrastructure. Section 69 of the Act requires a developer or licensee who intends to enter land under the management or control of the Uganda Land Commission or a District Land Board, to give 30 days' notice to the Uganda Land Commission or a District Land Board, stating the nature and extent of the acts intended to be undertaken.

Section 75 provides for royalties payable to local authorities as per excerpts below:

> *(7) The holder of a license for hydropower generation shall pay to the district local government in which his or her generating station, including any dam or reservoir, is situated a royalty agreed upon by the licensee and the district local government, in consultation with the authority.*

(8) Where the licensee and the district local government fail to agree upon the royalty, the authority shall determine the royalty to be paid to the district local government by the licensee.

(9) Where the generating station is situated in more than one district local government area, the royalty paid under subsection (7) shall be shared proportionately among the district local governments.

Interpretation: The Electricity Act is relevant to the Project in so far as Section 29(2)(f) and Section 33(1)(g) require that before establishing a power generation station assessment of impact of the project on socioeconomics, cultural heritage, environment, natural resources and wildlife should be undertaken.

5.2.2 Constitution of the Republic of Uganda (1995)

The 1995 Constitution restored all private land tenure regimes (which had previously been abolished under the Land Reform Decree, 1975). It divested the state and the Uganda Land Commission of radical title to land that was expropriated in 1975, and vested it directly in the citizens of Uganda. The constitution provides for, inter alia:

- The right of every Ugandan to a clean and healthy environment (Article 39);
- The responsibility of government to enact laws that protect and preserve the environment from degradation and to hold in trust for the people of Uganda such natural assets as lakes, rivers, wetlands, game reserves and national parks [Article 237(2)].

Interpretation: Relevance of the Constitution to the project is in the fact that it is the principal law onto which all socialenvironmental protection laws are derived.

5.2.3 Land Tenure Regimes and Transfer of Land

The Article 237 of the Constitution (1995) vests land ownership in citizens of Uganda and identifies four land tenure systems, namely: customary; freehold; mailo; and leasehold. However, an applicable tenure system within Isimba HPP is customary ownership which was former public land. These systems are detailed under Section 4 of the Land Act (Cap 227) as outlined below:

Mailo Tenure

The Mailo land tenure system is a feudal ownership introduced by the British in 1900 under the Buganda Agreement. "Mailo" is a Luganda word for ―milell as the original grants under the agreement were measured in square miles. Prior to the 1975 Land Reform Decree, Mailo land was owned in perpetuity by individuals and by the Kabaka (hereditary King of Buganda). All Mailo land parcels have title deeds.

Persons who buy portions (kibanja[7]) on Mailo land are protected by Ugandan law to live on and use the land, but they are obliged to pay certain annual royalties to the Mailo owner. No title deed is associated with kibanja purchase: the Mailo owner would simply write a sale (purchase) agreement witnessed by village local leaders, giving the kibanja buyer full rights to own and use the purchased portion of Mailo land. Such a buyer can sell his/her kibanja to a new owner but notify Mailo owner and local leaders about the changed ownership. In cases of compensation, an apportionment of land value of 70% and 30% share of the market value is given to the kibanja owners and landlord respectively, regardless of any development on that land. In Isimba HPP Project site, valuation for land compensation apportioned 70% of cash payment to kibanja owner and 30% to Mailo owner. This is in line with national guidelines and requirement of the Chief Government Valuer. It should be noted that structures and crops on such land are valued separately from land and full compensation is awarded to the owner of the affected assets without sharing.

---

[7] " Kibanja" is a Luganda word for a portion of land bought from Mailo land. Kibanja owner does not have a title deed but only a purchase agreement from Mailo owner (who holds the title deed). "Bibanja" is plural for kibanja. Luganda is language of Baganda the largest tribe in Uganda.

The Mailo tenure system:

- Derives its legality from the Constitution and its incidents from the written law. ▪
  Involves holding of land in perpetuity.
- Permits separation of ownership of land from the ownership of development on land made by a lawful or bona fide occupant[8].
- Enables the holder to exercise all the powers of ownership, subject to the rights of those persons occupying the land at the time of the creation of the mailo title and their successors.

Although only these latter forms of tenure are legally defined under the Land Act, the context of common law also recognizes the statute of ―Licenseell or ―Sharecroppersll; these terms having similar meanings in practice. Licensees are persons granted authority to use land for agricultural production. Traditionally, such production would be limited to annual crops and not perennial types. Licensees have no legal security of tenure or any property right in the land and their tenure is purely contractual.

It will be noted, however, that funding agency requires (especially WB's) compensation of affected persons irrespective of legality of their tenure on land.

Customary land (Former public land)

The customary land tenure is the most dominant in Uganda. This is the system whereby land is owned and disposed of in accordance with customary regulations. This tenure is governed by rules generally accepted as binding and authoritative by the class of persons to which it applies. In other words customary regime is not governed by written laws. Holders of land under the customary system do not have a formal title to the land they use but generally have secure tenure

Customary occupants are occupants of former public land and occupy land by virtue of their customary rights; they have proprietary interest in the land and are entitled to certificates of customary ownership which may be acquired through application to the parish land committee and eventual issuance by the District Land Board.

Rights of Spouse and Children

Compensation and resettlement rights of spouses and children are protected under the Constitution of Uganda and the Land Act (Cap 227). The consent of spouse and children must be acquired prior to any transaction by head of households on land on which the family lives.

Section 40 of the Land Act, 1998 requires that no person shall:

a) Sell, exchange, transfer, pledge, mortgage or lease any land; or enter into any contract for the sale, exchange, transfer, pledge, mortgage or lease of any land.
b) Give away any land or enter into any transaction in respect of land:

- In the case of land on which ordinarily reside orphans, who are still minors, with interest in inheritance of the land, except with prior written consent of the Committee.
- In the case of land on which the person ordinarily resides with his or her spouse, and from which they derive their sustenance, except with the prior written consent of the spouse.
- In the case of land on which the person ordinarily resides with his or her dependent children (minors), except with the prior written consent of the Committee[9].

[8] *Lawful and "bona fide" occupants are defined under the Land !ct, Section 30. They are called "kibanja" occupants.*

[9] *"Committees "are defined under Section 65 of the Land Act; as Parish Land Committees.*

- In the case of land on which the person ordinarily resides with his or her dependent children (minor), except with the prior written consent of the dependent children (minor).

Interpretation: All legally recognised land tenure regimes in the project area are eligible for compensation. Spouses and children are important in decisions regarding compensation if their household is affected by the project and this should be considered both during compensation and when developing and implementing community development interventions.

5.2.4 Land Act, Cap 227

The Land Act principally addresses four issues namely; holding, control, management and land disputes. As regards tenure, the Act repeats, in Section 3, provisions of Article 237 of the Constitution which vests all land in the citizens of Uganda, to be held under customary, freehold, mailo or leasehold tenure systems. However, the Land Act provides for acquisition of land or rights to use land for execution of public works.

Regarding control of land use, the Act reaffirms the statutory power of compulsory acquisition conferred on the government and local authorities under articles 26(2) and 237(2) (a) of the Constitution (Section 43). Since the Act does not repeal the Land Acquisition Act No. 14 of 1965, it is assumed that this legislation meets requirements of Article 26(2) of the Constitution that requires a law to be in place for the payment of compensation and access to the courts. The Act also requires that landowners manage and utilize land in accordance with regulatory land use planning (Sections 44 and 46).

Section 77(2) of the revised edition (2000) of the Land Act 1998 provides for a disturbance allowance on top of the computed compensation amount as follows:

- 30% of compensation amount if quit notice is given within 6 months.
- 15% of compensation amount if quit notice is given after 6 months.

Interpretation: The Land Act will govern all aspects related to land taken by the dam flood area and its compensation either by replacement with physical land parcels or through cash payments. The Land Act also guides about how various land uses and tenure systems are compensated.

5.2.5 Local Government Act (1997)

Local Government Act 1997 provides for the system of Local Governments, which is based on the District. Under the District there are lower Local Governments and administrative units. This system provides for elected Councils whereby chairmen nominate the executive committee of each council, functions of which include:

- Initiating and formulating policy for approval by council;
- Overseeing the implementation of Government and Council policies, monitor and coordinate activities of Non-Government Organizations in the District; and
- Receiving and solving disputes forwarded to it from lower local governments.

The Act empowers District administrations to develop and implement District rates upon which compensation for crops and non-permanent structures is based. Therefore, local administrations (Districts and local councils or LCs) will have an important role during resettlement and verification of affected persons.

This Act will be relevant to the project as all District Local Governments covered by the project infrastructure will be stakeholders and will have jurisdiction over implementation of the project. Kayunya, Kamuli and Jinja District Local

Government will have key responsibilities of representing to local affected communities at different stages of project development. They will have social monitoring as key responsibilities during construction and operation of the project.

5.2.6 Land Acquisition Act (1965)

This Act makes provision for procedures and method of compulsory acquisition of land (eminent domain) for public purposes. The Minister responsible for land may authorize any person to enter upon the land, survey the land, dig or bore the subsoil or any other actions necessary for ascertaining whether the land is suitable for a given public purpose. However, compensation should be paid to any person who suffers damage as a result of such actions.

Obviously due to its age, the Land Acquisition Act stops at payment of compensation to affected people and doesn't consider requirement for a project to purchase alternative land for affected people as long as affected people are promptly and adequately compensated. However multilateral funding agency requirements (including World Bank) provide for provision of replacement land if affected persons seek this option and it is expected that Isimba Hydro power Project will meet this option in cases where PAPs demand it.

Interpretation: Although Government is usually reluctant to invoke this right, it has powers to acquire land in public interest in cases where an owner objects to the project or compensation provided.

5.2.7 Occupational Health and Safety (OHS) Act 2006

The Act replaces the Factories Act (1964). It departs from the original listing of _don'ts' and now has a new scientific approach in which technical measures required for protection of workers are spelled out, hence taking on a —preventive approachll.

The Act requires employers to provide and maintain safe working conditions, and to take measures to protect workers and the public from risks and dangers of their works, at his or her own cost (Section 13). Employers with more than 20 workers should prepare and often revise a written policy with respect to safety and health of workers (Section 14). Every workplace must be kept in a clean state, free from effluent arising from any drains and sanitary facilities (Section 46). The contractor therefore is obliged to provide employers with washing facilities, First Aid, facilities for meals and safe access to workplaces.

It further stipulates [Section 13(1)(b)] that it is the responsibility of the employer —to ensure, as far as is reasonably practicable, that the working environment is kept free from any hazard due to pollution by:

- Employing technical measures applied to new plant or process in design or installation or added to existing plant or processes; or
- Employing supplementary organizational measures.

Section 35 (a) makes it the duty of every worker to take reasonable care for the health and safety of himself or herself and of any other person who may be affected by his or her acts or omissions at work.

Interpretation: This Act will be especially relevant for OHS of Isimba Hydro Power Dam construction crews and subsequently, maintenance personnel. This Act is relevant the Project as a large labour force (up to1000 people) will be employed during the construction phase expected to last 4-5 years. A smaller number of workers will be employed for operation and maintenance of the power station and the transmission line.

5.2.8 The Physical Planning Act, 2011

This Act replaced the Town and Country Planning Act, Cap 246 which was enacted in 1951 and revised in 1964 but is now inconsistent with contemporary government system in Uganda. The 1951 Act was enacted to regulate and

operate in a centralised system of governance where physical planning was carried out at national level through the Town and Country Planning Board. Implementation of the Act was supervised by local governments, especially the urban local governments.

Uganda has since gone through many social, political and economic changes. For example, promulgation of the 1995 Constitution established a decentralised system of governance which divulged powers and functions including physical planning, finance and execution of projects from the central government to local governments. This therefore created a need to enact a physical planning legislation which is consistent with this Constitutional requirement. The Physical Planning Act, 2011 establishes district and urban physical planning committees, provides for making and approval of physical development plans and applications for development.

Section 37 of The Physical Planning Act, 2011 requires an EIA permit for developments before they are implemented, stating:

> *"Where a development application related to matters that require an environmental impact assessment, the approving authority may grant preliminary approval subject to the applicant obtaining an EIA certificate in accordance with the National Environment Act".*

Interpretation: The Act is relevant to the proposed project as Isimba HPP project infrastructure (such as roads, or material source sites) will have to be considered as part of future physical planning in certain areas and therefore conformity to local physical planning requirements is essential.

5.2.9 Historical Monuments Act (1967)

This Act was assented to on 21st October 1967, and came into force on 15th May 1968. It provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest. According to this Act, the responsible Minister may, by statutory instrument, declare any object of archaeological, paleontological, ethnographical, traditional or historical interest to be a protected object. Once thus declared, the Act adds, no person whether owner or not shall do any of the following:

- Excavate soil so as to affect to its detriment, any object declared to be preserved or protected.
- Make alteration, addition to, or repair, destroy, deface or injure any object declared to be preserved or protected.

Sub-section 12(1) requires that any portable object discovered in the course of an excavation shall be surrendered to the Minister who shall deposit it in the Museum. However, the Act adds that, notwithstanding provisions of the subsection, where any object is discovered in a protected site, place, or monument, the owner of the protected site, place, or monument shall be entitled to reasonable compensation.

Interpretation: This Act requires that any chance finds encountered during project construction shall be preserved by the Department of Monuments and Museum in the Ministry of Tourism, Wildlife and Heritage.

5.2.10 Public Health Act, Cap 281

This Act provides local authorities with administrative powers to take all lawful, necessary and reasonable measures to prevent the occurrence or deal with any outbreak or prevalence of any infectious communicable or preventable disease and to safeguard and promote the public health. The Act mandates local authorities (Section 103) to prevent pollution of watercourses in interest of public good.

Interpretation: This Act is applicable to onsite management of construction waste, sewage and domestic waste during construction and or operation of the power station to prevent social effects such as contamination of community water resources leading to public health impacts.

5.2.11 Mining Act, Cap. 148

This Act enacted in 2003 repealed and replaced the Mining Act, Cap. 248, with a new legislation on mining and mineral development, which conforms, and otherwise gives effect, to the relevant provisions of the Constitution; to vest the ownership and control of all minerals in Uganda in the Government; to provide for the acquisition of mineral rights.

Stone quarry sites and gravel borrow pits will be necessary for materials needed to construct the power project and applicable licenses shall be obtained from the Commissioner of the Geological Survey and Mines. The Mining Act of 2003 regulates mining developments including set up of new quarries and/or sandpits. The extraction of stone/aggregate and murram materials will be undertaken in line with the provisions of this Act. Issues of restoration of the sites after murram extraction will be of key importance after construction of the proposed project.

Section 789(b) of the Mining Act limits stone quarrying within 200 metres, or such greater distance as may be prescribed, of any inhabited, occupied or temporarily unoccupied house or building, or any land.

Interpretation: This Act will apply to the project"s contractors who will be required to obtain license for extraction of stone/aggregate and murram required for concrete dam construction. Siting quarry sites should comply with the 200 meter safety radius prescribed by this Act.

5.2.12 Workers' Compensation Act (2000)

Section 28 of The Workers' Compensation Act (2000) states that:

- Where a medical practitioner grants a certificate that a worker is suffering from a scheduled disease causing disablement or that the death of a workman was caused by any scheduled disease; and,
- The disease was due to the nature of the worker_s employment and was contracted within 24 months immediately previous to the date of such disablement or death, the worker or, if he or she is deceased, his or her dependants shall be entitled to claim and to receive compensation under this Act as if such disablement or death had been caused by an accident arising out of and in the course of his or her employment.

Interpretation: This Act is relevant to the Project as large labour force will be employed for construction activities. Provision of personal protective equipment (PPE) to employees is required to minimise accidents and injuries. Contractors must ensure that construction workers have safety gear to ensure compliance with this Act.

5.2.13 Employment Act, 2006

Employment Act, 2006 (which repeals Employment Act Cap 219 enacted in 2000) is the principal legislation that harmonises relationships between employees and employers, protect workers interests and welfare and safeguard their occupational health and safety through:

- Prohibiting forced labour, discrimination and sexual harassment at workplaces (Part II; Part IV). ▪ Providing for labour inspection by the relevant ministry (Part III).
- Stipulating rights and duties in employment including weekly rest, working hours, annual leave, maternity and paternity leaves, sick pay, etc. (Part VI).

- Continuity of employment i.e. continuous service, seasonal employment, etc (Part VIII).

Interpretation: This act is relevant in a sense that for the 4-5 years of project construction (and subsequent operation and maintenance), this Act will govern management of labourforce hired by the contractor (during construction) and the power station (operation phase) in regard to their rights and welfare.

5.2.14 Petroleum Supply Act, 2003

Over the construction period, the contractor will require considerable fuel (petrol and diesel) supplies to be stored at the construction camp or equipment yard for use by motorised equipment and power generators. The Petroleum Supply Act of 2003 provides for supervision and monitoring transportation, supply, storage and distribution of petroleum products. Among other provisions, the Act provides for safety and protection of public health and the environment in petroleum supply operations. According to the Act, fuel storage for construction projects must be licensed.

Interpretation: Relevance of this Act to the Project is in regard to protection against fire safety and contamination at the storage site (camp or construction yard) and protection of public safety during fuel storage or transfer operations. For fuel storage at project sites the contractor must obtain a licence from the Petroleum Supplies Department in the Ministry of Energy and Mineral Development.

5.2.15 Water Act, Cap 152 1997

It is envisaged that water will be required for project construction activities and consumption by construction crew. Abstraction of water will be regulated by this Act. According to Section 6 of the Act, no person acquires any rights to use water or to construct or operate any works unless authorized under Part II of the Act. Thus, unless a person is an occupier of land on which surface water exists, water may not be used for any purpose without the approval of an authority. The general rights to use surface water are limited to domestic use and fire fighting, indicating the importance attached to water supply for domestic purposes. Section 18 states that a person is not allowed constructing or operating any works unless he has a permit granted for that purpose by the Director, Directorate of Water Development (DWD). Construction is defined to include alteration, improvement, maintenance and repair.

Section 31 (1) of the Water Act stipulates that it is an offence for a person to pollute water through discharge of waste into watercourses. In conformity with this law, the spillage of petroleum products, disposal of overburden, litter or construction waste should be avoided during project construction and operation or maintenance activities.

Interpretation: This Act is relevant to the Project as the proposed project infrastructure will be constructed on a watercourse that in some locations is used by local people for domestic water supply and fishing. During project development, a water abstraction permit will be required to abstract water from River Nile.

5.2.16 Road Act, Cap 358

The Road Act (Cap 358 of the Laws of Uganda) provides for maintenance of roads by empowering the Minister of Works and Transport and respective local governments. The need for Government to maintain basic control over developments along the road is to ensure that basic necessities of maintaining road geometry and engineering needs such as sight lines, horizontal curvatures, sight distances and road safety considerations are in place. Consequently, town council would have authority over town roads where as district roads are governed by the district local government.

Interpretation: This Act applies to construction of proposed roads meant to enable access to the project site. The fact that these roads will remain important transport infrastructure in the local community necessitates conformity to requirements of this Act.

5.2.17 Other laws with a social impact connotation

It is noted that effect on environment will result almost always lead to a socio-economic impacts as seen from examples below:

a) *Air quality impairment* (dust and exhaust emissions): This results into respiratory health impacts and associated healthcare expenses.

- *Hence applicable regulations: Draft National Air Quality Standards, 2006.*

b) *Water pollution due to improper effluent disposal in River Nile* would affect downstream users, particularly downstream of the proposed powerhouse location.

- *Hence applicable regulations: National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, 1999*

c) Public health risks due to improper waste management. Soil and water contamination by waste could lead to disease outbreak and financial cost associated with healthcare services.

- *Hence applicable regulations are:*

  National Environment (Waste Management) Regulations, 1999, and,
  Public Health Act, Cap 281

5.3 INSTITUTIONAL FRAMEWORK

The main agencies which will be involved in managing social impacts and mitigation processes are:

- Ministry of Energy and Mineral Development.
- Ministry of Gender, Labor and Social Development.
- Uganda Electricity Transmission Company Ltd.
- Uganda Electricity Generation Company Limited
- Rural Electrification Authority
- Local District Administrations.
- Ministry of Lands, Housing and Urban Development (approving compensation rates).
- Ministry of Tourism
- Electricity Regulatory Authority

These are described below.

5.3.1 Ministry of Energy and Mineral Development (MEMD)

The Ministry is responsible for the energy sector, dealing specifically with policy formulation, policy implementation and monitoring. In 1999, following approval by cabinet of the Power Sector Reform and Privatization Strategy and enactment of new electricity law (The Electricity Act, 1999), Electricity Regulatory Authority (ERA) was established to regulate the energy sector. Thus, while the MEMD formulates policy, ERA is charged with the mandate of regulating the energy sector, independent of the Ministry.

Interpretation: Implementation of the Project will be by UEGCL which is overseen by MEMD.

5.3.2 Ministry of Gender, Labour and Social Development (MGLSD)

The Ministry of Gender, Labour & Social Development (MGLSD) is responsible for coordinating social development in Uganda. In collaboration with other stakeholders, MGLSD is responsible for inspecting state of occupational safety, labour relations, community empowerment, protection and promotion of rights and obligations of vulnerable groups for social protection and gender-responsive development.

Interpretation: MGLSD is a stakeholder in the Project and will be responsible for inspecting the project for compliance with occupational health and safety regulations, national labour laws and gender equity.

5.3.3 Ministry of Tourism, Wildlife and Heritage

In this ministry found the Department of Monuments and Museums mandated to protect, promote and present the cultural and natural heritage of Uganda through collection, conservation, study and information dissemination for enjoyment and education.

The department's key functions are;

a) Research about natural and cultural heritage
b) Conservation, and maintenance of important physical cultural Resources or Heritage Collections.
c) Provision of professional knowledge and information on the archaeology and palaeontology of Uganda
d) Publication of research findings in appropriate publications
e) Exhibition and interpretation of specimens for public study and enjoyment
f) Monitoring implementation policies and strategies of historical and cultural heritage conservation and development.
g) Development of strategies for community participation in cultural heritage.
h) Promote public awareness about cultural and natural heritage through formal and informal education. i) Provide technical guidelines to the private investors

Interpretation: This Ministry will be responsible for preservation of any chance finds encountered during project implementation.

5.3.4 Uganda Electricity Transmission Company Limited (UETCL)

Uganda Electricity Transmission Company Limited (UETCL) and Uganda Electricity Generation Company Limited (UEGCL) are Public Limited Companies which were incorporated in March 2001 as a result of the power sector reform and liberalization policy that unbundled Uganda Electricity Board (UEB) into successor companies. The Companies operate under policy guidance of the Ministry of Energy and Mineral Development. UETCL's mission is to dispatch, transmit quality and reliable bulk power in a viable and efficient manner; be an efficient and commercially focused single buyer actor and; mitigate emergency power situations in Uganda. The mandate of UETCL is to develop and implement national strategic plan as the appointed ―Single Buyer Actorll in the power market. UETCL operational licenses require it to:

- Operate its Operation of High Voltage Transmission Grid (HVTG) facilities in compliance with the Grid code that involves promoting and developing policies and programs to achieve high level quality and reliable HVTG services in accordance with the Electricity Act.
- Operate the national power system with the objective of dispatching available electricity to meet load requirements at the lowest cost for customer service, maintaining system integrity and reliability.

- Purchase power to provide continuous and economic supply of electricity to meet the load requirement for customers served directly or indirectly from HVTG facilities at lowest reasonable cost.
- Import and export electricity power to neighbouring countries pursuant to the terms of the agreement(s) for such international power transactions.

It is the mandate of UETCL to transmit power to and from different substations in the national grid and in this regard, UETCL will evacuate power from Isimba HPP through the proposed transmission line.

Interpretation: UETCL will operate and maintain the 220 kV transmission line that evacuates power from the power house to Bujagali substation.

5.3.5 Rural Electrification Agency, REA

REA is a government agency responsible for promoting rural electrification by moving of our population from use of traditional energy sources (e.g. firewood and other basic forms of biomass) to the adoption of modern energy services (e.g. electricity, petroleum fuels, bio-fuels and improved stoves). REA is charged with the following key responsibilities:

a) Undertake basic planning and preparation of projects in line with the Indicative Rural Electrification Master Plan (IREMP) and as determined by the Rural Electrification Board.

b) Implement Government's priority rural electrification projects for public funding as determined by the Board.
c) Generate and provide information relating to investment opportunities, costs and benefits of rural electrification and available technical and financial support facilities to all stakeholders.

d) Recommend to the Rural Electrification Board the most efficient use of the Rural Electrification Fund (REF) for promotion of Rural Electrification Programme as set by Government policy.

e) Process applications for financial support from the REF.
f) Build and maintain a national database on rural electrification projects in Uganda.

g) Prepare for the Board an annual status report on the Rural Electrification Programme indicating progress, challenges and obstacles, and identifying options for mitigating the obstacles.

Interpretation: REA is responsible for rural electrification programs and this could be supported by increased availability of power on the national grid or provision of 33 kV connectivity at the power station"s substation.

5.3.6 Electricity Regulatory Authority, ERA

The Electricity Regulatory Authority (ERA) is a statutory body established in accordance with the Electricity Act of 1999 (CAP 145) as an agency of the Ministry of Energy and Mineral Development. The mandate of the ERA is "to provide for the generation, transmission, distribution, sale and use of electricity" in Uganda; to guide the liberalization of the electricity industry; and to manage licensing, rates, safety and other matters concerning the electricity industry. The main functions of ERA include:

- Issuing licenses for generation, transmission, distribution, of electricity processing applications for investors in the energy sector;
- Enforcement of requirement under the Act to ensure compliance with regulations;
- Establishing tariffs, reviewing, and approving rates of investment in the electricity sector; ▪

Advising the minister regarding the need for electricity projects; and

- Developing and enforcement of energy standards.
  ERA will ensure that, the operations costing of energy from the planned project will be in accordance with its set standards and tariffs.

Interpretation: ERA will license development and operation of this power station.

5.3.7 Local Governments

Local Governments are in a position to promote awareness of the pressing social needs in the community and are of importance to social investment. They can foster a sense of responsibility for social well-being among all sectors including business and community groups, and can play an important role as both leader and champion for community based poverty reduction initiatives.

In the context of Development Assessment, Social Impact Assessment is used to predict the impacts on individuals, groups and communities resulting from changes arising from development. SIA can be an invaluable tool for enhancing the positive effects for development and reducing adverse social impacts that can threaten the viability and sustainability of a development proposal.

Local government benefit from SIA since it provides a legitimate means to assess development applications taking into account their social and cultural effects. In this case it is fundamental for Local Governments to insist on SIAs to be undertaken because in most cases, the cost of rectifying social and environmental impacts of development are borne by the public sector, not by the corporation that created them. Therefore Local Governments should be involved in SIA because it is to its advantage as well as developers to identify and rectify potential problems early in the development application process and subsequently minimize conflicts in the community and/or resistance to the Project. Despite that, SIA practice tends to lag behind legislative opportunity, the salience of SIA is increasingly acknowledged.

Local Governments are mandated by the Local Government Act, to guide project implementation at a local level, land acquisition implementation requirements and make decisions regarding actions to solve problems and designate officers to solve those problems through the following instruments as described below.

a) Community Development Officer

The Local Government Community Development Officers (CDO) work to improve the quality of life for various groups in the community. A CDO is likely to work on a range of projects which include:

- Setting up educational support schemes in areas of deprivation. ▪
  Arranging counseling and retraining for redundant workers.
- Developing projects, for teenagers and other unemployed groups of people in the community.
- They also mobilize the community for learning, information delivery and awareness creation on emerging innovations/technologies and policies.

b) Local Council Courts

The Constitution of the Republic of Uganda provides for the creation of Local Council as part of the decentralization of power. Local Councils (LC) are the lowest units with administrative, legislative and judicial powers on behalf of Central Government. It is also the structure closest to the people through the Village Council. These are the nearest authorities most communities turn to in case of conflicts. They are intended to address the problems associated with a cumbersome court system and also attempt to bring justice nearer to the people. An LC member should be a resident of the area of high moral character with knowledge of the common local language. LCs have the authority to

handle cases such as; land disputes held under customary tenure, disputes in identifying a customary hire, damage of property, trespass, contracts, assaults and debts.

c) District Land Board

The DLBs facilitate the registration and transfer of land ownership. In addition they compile and maintain a list of compensation rates payable in respect of crops, buildings of non-permanent nature and any other thing that may be described. These lists are reviewed annually.

d) Village Land Committees

The village committees will manage and deal with social issues that arise out of resettlement such as:

- Identification of community social services affected by the Project.
- Assist in the resolution of grievances concerning land acquisition, compensation and resettlement operation.
- Ensuring adequate replacement of land for the PAP's.
- Planning and implementation of income generating and poverty reduction programs at community level. ▪ Involving vulnerable groups in the planning and implementation of resettlement.
- The review of results of resettlement and income restoration.
- Community mobilization and ensuring law and order in villages through local defense units.

Interpretation: District and Local Council administrations are stakeholders in the Project and will have input in to the ESIA process as well as subsequent monitoring. For example CDOs will review the project SIA report and provide guidance about social conditions relevant to project approval decision.

5.3.8 Ministry of Lands, Housing and Urban Development

The Chief Government Valuer in the Valuation Division in the Ministry of Lands, Housing and Urban Development (MLHUD) is responsible for approving the Valuation Roll. This demands fair and transparent compensation and as such all property valued are first inspected by the Chief Government Valuer.

Interpretation: The ministry is important in managing social impacts associated with loss of land and buildings. This ministry will play a direct role in compensation and resettlement activities of the proposed Isimba Dam Project.

5.3.9 Ministry of Water and Environment (MoWE)

Through its technical arm (the directorate of Water Development DWD), MoWE has a responsibility to regulate quality and quantity of water resources in the country. DWD's major function is to promote rational management and use of water resources of Uganda by coordinating and regulating activities that may impact water quality and quantity. Specifically quality and quantity of water in watercourses is monitored by DWD's Directorate of Water Resources Management (DWRM), which also issues permits for water abstraction and effluent disposal.

The Ministry of Water and Environment (MWE) has the responsibility for setting national policies and standards, managing and regulating water resources and determining priorities for water development and management. It also monitors and evaluates sector development programmes to keep track of their performance, efficiency and effectiveness in service delivery. MWE has three directorates:

- Directorate of Water Resources Management (DWRM), ▪ Directorate of Water Development (DWD) and
- Directorate of Environmental Affairs (DEA).

The Directorate of Water Resource Management (WRMD) is responsible for water resources panning and regulation; monitoring and assessment and water quality management. WRMD has the following key functions:

i) **Water Quality Management** in all Uganda's water bodies
ii) **Management of international and transboundary water resource management** promote transboundary regional cooperation for equitable and reasonable utilisation of shared water resources. Specific roles are:

- Transboundary water resources management policy formulation, reviews, implementation and advice, ▪ Regional coordination of transboundary projects and programmes,
- Transboundary water resources management MIS and monitoring, and evaluation of transboundary projects and programmes, and
- Raising awareness, capacity and confidence-building as well as capacity-building on transboundary water resources management issues.

Lake Albert is a shared lake (between Uganda and DRC) and thus its management is a mandate of WRMD. iii)

Regulation and use of water resources in Uganda

Anybody abstraction of water from a lake, river or underground using a motorized pump; discharging wastewater into the environment; drilling for water; or construction of dams and other structures on water bodies is required to apply for a water permit according to the Water Act. These permits are issued by WRMD.

The Directorate of Water Development (DWD) is responsible for urban water supply, water for production, rural water supply and urban water regulation.

The Directorate of Environmental Affairs (DEA) comprises:

- ***Climate Change Unit (CCU),*** whose main objective is to strengthen Uganda's implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol (KP).
- Environment Support Services (ESS);
- ***Forest Sector Support Department (FSSD***) that promotes efficient and effective governance of the forestry sector.
- ***Metrology Department*** that monitors weather and climate, exchange data/information and products and issue advisories to the nation.
- ***Wetlands Management Department (WMD)*** which protects wetland resources in Uganda.

MWE also oversees autonomous agencies namely NFA and NEMA.

Interpretation: Overall, this Ministry is responsible for environmental, social aspects related to and water resources management in Uganda. MWE is also responsible for ensuring good river and catchment health of River Nile. These functions ensure harmony and socio-economic development in local communities.

5.4 INTERNATIONAL BEST PRACTICE

This SIA has been conducted to conform to standards of Uganda Government and IFC safeguard policies, the Wold Bank Branch that lends to the private sector. This is so because Isimba HPP will be implemented as a public-private partnership (PPP) project.

5.4.1 International Finance Corporation (IFC)

The IFC has operates a set of Performance Standards on Social and Environmental Sustainability (in force from July 2006). These Standards replace the prior safeguard policies and will be used to evaluate any project seeking funding through the IFC. The Equator Principles[10] have been revised to adhere to the new IFC Performance Standards (but do not reference the Sustainability Policy). The Performance Standards are listed in Box below and ones likely to be triggered by the project indicated by —√ll symbol.

Box 2: IFC Performance Standards

- Performance Standard 1: Social and Environmental Assessment and Management; √ ▪
Performance Standard 2: Labour and Working Conditions; √
- Performance Standard 3: Pollution Prevention and Abatement; √
- Performance Standard 4: Community Health, Safety and Security √;
- Performance Standard 5: Land Acquisition and Involuntary Resettlement √;
- Performance Standard 6: Biodiversity Conservation and Sustainable Natural Resource Management √; ▪
Performance Standard 7: Indigenous Peoples X;
- Performance Standard 8: Cultural Heritage √.

Performance Standard 1 (see Box below) underscores the importance of managing social and environmental performance throughout the life of a project. It identifies the need for an effective social and environmental management system that is dynamic and continuous, involving communication between the client, its workers, and the local communities directly affected by the communities. It requires thorough assessment of potential social and environmental impacts and risks from the early stages of project development and provides order and consistency for mitigating and managing these on an ongoing basis[11].

Box 3: Objectives of Performance Standard 1

- To identify and assess social and environmental impacts, both adverse and beneficial, in the projects area of influence.
- To avoid, or where avoidance is not possible, minimise, mitigate, or compensate for adverse impacts on workers, affected communities, and the environment.
- To ensure that affected communities are appropriately engaged on issues that could potentially affect them.
- To promote improved social and environmental performance or companies through the effective use of management systems.

IFC Performance Standards reinforce the importance of effective community engagement through disclosure of project-related information and consultation with local communities on matters that affect them. Therefore through Performance Standard 1, IFC requires clients to engage with affected communities through disclosure of information, consultation, and informed participation, in a manner commensurate with the risks to and impacts on the affected communities.

---

[10] *A financial industry benchmark for determining, assessing and managing social & environmental risk in project financing*

[11] *IFC (2006). Guidance Note 1. Social and Environmental Assessment and Management Systems. World Bank Group.*

IFC is committed to putting into practice processes of community engagement that ensure the —free, prior, and informed consultation of affected communities, leading to broad community support 12 for the projectll[13].

5.4.2 Comparison of the IFC Performance Standards and the World Bank Safeguards

All key principles of the World Bank Operation Policies have been incorporated into the new IFC Performance Standards. There are, however, some slight differences between the guidelines, the most relevant of which are outlined in Table 5-1 below.

Table 5-1: Comparison of IFC Performance Standards and World Bank Safeguards

Performance Standard 1: Social and Environmental Assessment and Management System	**World Bank Operational Policies**
▪ Goes beyond assessment to address implementation through the use of a social and environmental management system	▪ OP 4.01 mostly focuses on assessment only
▪ Broader scope of assessment with broader geographic and time horizon; third party actions	▪ No equivalent requirement in OP 4.01
▪ Requires more comprehensive and on-going information disclosure and consultation with affected communities for all projects at a level commensurate with the project's risks and impacts.	▪ OP 4.01 requires consultation for all Category A, and as appropriate, Category B projects.
▪ Requires free, prior and informed consultation and informed participation of affected communities for projects with significant impacts on them. In addition, IFC's Sustainability Policy requires that IFC will verify broad community support for the project within the affected communities.	▪ No equivalent requirement in OP 4.01
▪ Requires clients to establish a grievance mechanism	▪ No equivalent requirement in OP 4.01
▪ Clients must disclose the Action Plan to affected communities, provide them with periodic reports on its implementation and disclose any updated measures and actions to address issues of concern to affected communities.	▪ OP 4.01 has no disclosure requirements beyond assessment.
▪ Documentation and processes are driven by risks and impacts, not project categorisation.	▪ Driven by project categorisation.
▪ Requires an ongoing and iterative consultation process throughout the life of the project.	▪ A requirement to consult —at least twicell during the assessment process
▪ All trans-boundary impacts are considered as part of the assessment process.	▪ International Waterways (OP 7.50) deals with transboundary issues.
▪ Alternatives analysis will be focused on alternatives to avoid adverse impacts. No requirement to compare the —without projectll situation.	▪ Requirement to compare the —without projectll situation.

5.4.3 Guidelines of the World Commission of Dams (WCD)

WCD was created by World Bank & IUCN in May 1998 in response to growing opposition to large dams. International Commission on Large Dams (ICOLD) defines a large dam as a dam with a height of 15 meters or more from the foundation. If dams are between 5-15 meters high and have a reservoir of more than 3 million cubic meters, they are also classified as large dams. The 10 WCD recommendations below will be useful for implementation of the project:

---

(12) Broad community support is a collection of expressions by the affected communities, through individuals or their recognised representatives, in support of the project. There may be broad support even if some individuals or groups object to the project.

(13) IFC Policy on Social and Environmental Sustainability (paragraph 20).

1. Development needs and objectives should be clearly formulated through an open and participatory process, before various project options are identified.
2. A balanced and comprehensive assessment of all options should be conducted, giving social and environmental aspects the same significance as technical, economic and financial factors.
3. Before a decision is taken to build a new dam, outstanding social and environmental issues from existing dams should be addressed, and the benefits from existing projects should be maximized.
4. All stakeholders should have the opportunity for informed participation in decision-making processes related to large dams through stakeholder fora. Public acceptance of all key decisions should be demonstrated. Decisions affecting indigenous peoples should be taken with their free, prior and informed consent.
5. The project should provide entitlements to affected people to improve their livelihoods and ensure that they receive the priority share of project benefits (beyond compensation for their losses). Affected people include communities living downstream of dams and those affected by dam-related infrastructure such as transmission lines and irrigation canals.
6. Affected people should be able to negotiate mutually agreed and legally enforceable agreements to ensure the implementation of mitigation, resettlement and development entitlements.
7. The project should be selected based on a basin-wide assessment of the river ecosystem and an attempt to avoid significant impacts on threatened and endangered species.
8. Mechanisms to ensure compliance with regulations and negotiated agreements should be developed and budgeted for, compliance mechanisms should be established, and compliance should be subject to independent review.
9. A dam should not be constructed on a shared river if other riparian States raise an objection that is upheld by an independent panel.

5.5 STAKEHOLDER IDENTIFICATION

Stakeholders involved in Isimba Dam Project were identified and categorized into *primary* and *secondary* categories with their interests recorded and documented (see Table 5-2 below).

Table 5-2: Stakeholders Identification

Category	Stakeholder	Primary	Secondary	Interests in the Project
Central Government	MEMD	√		MEMD is the Project proponent, beneficiary of financing for the proposed Isimba Hydro power dam project and also the entity responsible for operationalization of this SIA during project implementation. Its key interest would be to construct a Hydro Power dam that generates 180 MW that feed into the national and regional grids. It is also responsible for resource mobilization, distribution and implementation of compensation and resettlement. MEMD is responsible to provide policy guidelines in the development of the energy and mineral sector. UEGCL is directly under policy oversight of MEMD and is therefore a secondary stakeholder.
	UEGCL	√		Uganda Electricity Generation Company Limited will implement this project and responsible for generation of electricity at Isimba HPP; thus having a direct role in

Category	Stakeholder	Primary	Secondary	Interests in the Project
				implementation of this project, hence Primary stakeholder status.
	UETCL		√	UETCL's key interest would be to develop a transmission infrastructure that evacuates power from Isimba HPP feeding into the national and regional grids. UETCL is also a service provider; ensuring power is evacuated to substations to be distributed to the communities by separate power distribution companies, hence assuming a secondary role.
	REA		√	REA is responsible for undertaking basic planning and preparation of projects in line with the Indicative Rural Electrification Master Plan (IREMP) and as determined by the Rural Electrification Board as eligible for support. REA functions mostly dwell on generating and providing information relating to investment opportunities, costs and benefits of rural electrification and available technical and financial support facilities to all stakeholders.
	MLHUD	√		The Chief Government Valuer in MLHUD approves property valuation. Additionally, property or cadastral survey report is approved by the Commissioner for Surveys & Mapping in MLHUD, which is therefore a primary stakeholder.
	MGLSD		√	MGSLD is a secondary stakeholder and will be interested primarily in labour conditions during dam construction and the entire project development: ▪ Community Rehabilitation Programme for the Disabled (CBR), ▪ Functional Adult Literacy Programme (FAL), ▪ Support to AIDS Orphans and Other Vulnerable Children (PCY), ▪ Elimination of Child Labour.
	DWD and WRMD	√		DWD manages water resources in the context of extreme events, mitigating the effects of extreme water-related events, information generation and dissemination. Support regional, sub-regional and capacities for data collection and processing and for planning, research, monitoring, assessment and enforcement. DWD controls water

Category	Stakeholder	Primary	Secondary	Interests in the Project
				flowing out of the Lake Victoria along River Nile, which in effect influences generation capacity and profile of any power station on the river. WRMD manages water quality and use in Uganda's water bodies. WRMD and DWD are therefore a primary stakeholders.
	NAFIRRI		√	NAFIRRI is mandated to carry out research, fish stock assessment and monitoring in all major water bodies in Uganda. Its therefore a secondary stakeholder with interest in impact on fish and fisheries in the river
	MTWA	√		The Ministry of Tourism, Wildlife and Antiquities (MTWA) mandate is to formulate and implement policies, strategies, plans and programs that promote tourism, wildlife and cultural heritage conservation for socio-economic development and transformation of country. The ministry is a primary stakeholder because some eco-tourism sites will be affected by the project.
Local Government	Kayunga District	√		The left bank is situated in Kayunga District so the District officials will mobilize and manage communities in affected areas since they have jurisdiction over them. They will also participate in managing and monitoring social impacts, mitigations and resettlement activities and grievances at local levels, making them a primary stakeholder.
	Kamuli District	√		The Right bank is situated in Kamuli District so the District officials will mobilize and manage communities in the affected areas since they have jurisdiction over them. They will also participate in managing and monitoring social impacts, mitigations and resettlement activities and grievances at the local levels. Though these roles Kamuli District will be a primary stakeholder.
	Jinja District	√		Part of the right bank is situated in Jinja district. Two villages will be affected by the proposed project and since the district administration will mobilize and manage communities in affected areas, Jinja local government is a primary stakeholder.
Funding agencies	(Currently unknown)		√	Any financing agencies associated with this project would hold —secondaryll stakeholder status.
Communities	Communities and PAPs	√		Communities will derive direct benefits from project development, community development initiatives and also suffer

Category	Stakeholder	Primary	Secondary	Interests in the Project
				negative social impacts. They are therefore primary stakeholders.
NGOs	Auxiliary Foundation		√	NGOs are usually engaged as —external monitorsll of implementation of resettlement and management of social impacts. Therefore their interests are regarded secondary in the project.
Tourism Agencies	UTB		√	Uganda Tourism Board as an umbrella for the tourism agencies in Uganda will have some of its member agencies operating along Victoria Nile affected thus affecting them too. They will therefore be considered a secondary stakeholder.
	Adventure tourism companies	√		They generate socio-economic benefits for communities, local and central governments such as tax revenue and employment associated with tourism. Some of these will be affected by the proposed project and are therefore primary stakeholders.

Consultations were conducted with stakeholders to introduce the project, its potential benefits and impacts as well as addressing any concerns raised. Issues raised are summarized in Box 1 but were mostly related to social-economic conditions and environmental conservation. A detail list of stakeholders consulted their responses and questions are presented in Appendix B.

Box 4: Key findings from stakeholder consultation

a) Project Implementation:

Common stakeholder queries and concerns were:

- *How long will the project development take because this is useful for entrepreneurs who may wish to develop services that support project development?*
- *All HEP developments seem to be concentrating on River Nile, What effects will the development have on other planned projects along the Nile?*
- *Incase many dams are constructed on River Nile, won"t there be a backwash effect in future creating floods in Jinja District?*
- *What considerations were taken to choose the best location of the dam and what were the alternatives?*
- *Is there a way the MAAIF can link with MEMD to reduce the decay of biomass that would by flooded to generate GHG* ▪ *Back flooding may affect others areas that were not in the plan. How will the project ensure that the same volume of water flows down to downstream communities?*
- *Will the district get electricity from the project and how long will Isimba HPP be on the grid?*
- *Kalagala Offset management plan (KOMP) exists and since Isimba HPP is part of Kalagala Offset area, It should be integrated in the KOMP.*
- *The proposed project if implemented may damage the already existing roads; therefore effort should be made to maintain all existing access roads or better still improve on them.*
- *Which are the actual homesteads to be affected by the project? How soon will valuation data of affected PAPs be given to district officials in charge?*
- *The reservoir extent needs to be clear because approximately 14km of the River stretch which will be covered by the reservoir will inundate white water rafting and completely shut down tourism and knock off effects in some districts.*

b) Land

- *Who gives consent on surveying affected land? Is it the land owners or squatter?*

- *Where will the PAPs whose land is going to be affected be resettled? Is there enough land?*

c) Timely, equitable compensation

- *The compensation rates set by the District Land Board should be revised so that the PAPs are fairly compensated.*
- *Most government projects get problems during the compensation stage especially if given in instalments. Will compensation be done in instalments?*
- *Are squatters on the affected land compensated?*
- *Will the government compensate PAPs with no land tittles because most of the people in Kamuli District do not own Land titles?*
- *Is "good will" of an economic facility compensated?*

d) Employment:

- *Will the proposed project consider employment for the locals?*
- *When employing workers for the project, won"t the contractors consider academic qualifications and bribes?*

***e) Tourism**:*

- *What are the immediate tourism resources to be affected by the project?*
- *How will people whose livelihood depends on tourism services be compensated (for example Kayaking instructors)?*
- *Won"t the reservoir affect Kalagala offset and Itanda falls?*
- *Won"t all tourist attraction be eliminated by the project?*

g) Grievances:

- *In case of any grievances, where will the offices be located?*
- *There are repercussions of a dam after it has been built. People employed by the project end up contributing to crime after the project ends. What measures have been put in place for such cases?*

h) Benefits:

- *Kisozi Sub-County sees less than 10 % benefit from the project, therefore request that as much as design is already done, the project should set up facilities such as schools, health centers or roads as a cooperate social responsibility.*
- *Is there a plan for revenue/project benefit sharing with stakeholders?*
- *The community desired to have a bridge to connect to Kamuli and Kayunga, Is it possible?*

i) Stakeholder Consultations:

- *Residents of Nampanyi village alleged not having been sensitized enough. Complaints were received by RDC Kayunga District where people refused to sign consent forms of property surveyors because of fear of taking away their land.*
- *The project team should have a development communication specialist who will prepare people for eventualities likely to take place for example loss of jobs after construction.*
- *The project team should include a Natural Resources Economist on the list to do the cost-benefit analysis.*
- *Long term effects such as effects on vibrations due to the project should be addressed to communities. There is need to engage with the CDOs to be involved in sensitization.*
- *Some technical personnel such as Community Development Officers (CDOs) should be involved when sensitizing communities.*

j) Kalagala Offset:

- *Mabira Management Area and Kalagala offset if affected by the project should be compensated.*
- *The project should provide a good monitoring plan for Kalagala offset. MOWE developed a good monitoring plan; the project can look at their plan and borrow best practices.*

6 SOCIAL-ECONOMIC BASELINE IN PROJECT AREAS

This section presents the socio-economic assessment, and current project socio-economic baseline situation formed through a combination of primary survey data, secondary data and stakeholder consultation. Knowledge of existing population, infrastructure (such as roads), available healthcare services and prevalent diseases, economic activity and literacy levels of the project area is essential to understanding project affected communities, potential benefits to recipient communities and likely challenges during project implementation.

6.1 Administrative Structures

The project areas are under administrative jurisdiction of respective decentralized local governments which function with autonomy to formulate development objectives and budgets in line with polices of the Central Government. This section briefly outlines the administrative structure of Uganda, particularly those administrative levels relevant to this Social Impact Assessment.

Administrative divisions in Uganda consist of Districts Local Councils(LCV), counties (LC IV), Sub -counties (LCIII), parishes (LCII), and Villages (LC I) in rural areas, and Districts/Cities (LCV), Municipalities (LCIV), Towns/Divisions (LCIII), Wards (LCII), and Cells (LCI) in urban areas. Since establishment of decentralization policy in 1991, the number of Districts has increased, reaching 80 in July 2006 and 112 in July 2010. Local government and administrative units are collectively known as local councils. This current decentralization reform was officially launched in October 1992 through a presidential policy statement. It was first enshrined in the Local Government (Resistance Councils) Statute of 1993 and later in the Constitution of 1995 and the Local Governments Act of 1997.

Table 6-1: Local Government Structure in Uganda

Level	Administrative Head	Political Head
District	Chief Administrative Officer (CAO)	Local Council V Chairman
Town Council	Town Clerk	Local Council IV Chairman (Mayor)
County	Assistant Administrative Officer (AAO)	Local Council IV Chairman
Sub-county	Sub-county Chief	Local Council III Chairman
Parish	Parish Chief	Local Council II Chairman
Village	n/a	Local Council I Chairman

Within the project area, the districts are split into counties, sub-counties and subsequently into parishes and villages. Most of the executive decisions are taken at the district and municipality level. The lower-level authorities are considered to be the sub-counties, towns and divisions, while parishes and wards are regarded as administrative units supporting their upper structures.
Kamuli District is composed of two Counties namely Bugabula and Buzaaya. The counties are composed of 12 subcounties and 1 Town Council (Kamuli TC). The district is comprised of 79 parishes and 756 villages. The administration headquarters are located in Kamuli Town, 63 kilometres north of Jinja Town.

Table 6-2: Administrative units Summary of Kamuli District

County	Sub county	No. of Parishes/wards	No. of Villages
Bugabula	Balawoli	8	76
	Bulopa	5	39
	Butansi	4	48
	Kamuli Town Council	4	21
	Kityunjwa	10	118
	Nabwigulu	8	55
	Namasagali	4	43
	Namwendwa	10	96
Buzaaya	Bugulumbya	7	67
	Kisozi	9	66
	Mbulamuti	4	43

	Nawanyago	3	39
	Wankole	3	45
	Total	**79**	**756**

Source: UBOS - 2002 Uganda Population and Housing Census

In Kayunga district, there are two counties (Bbaale and Ntenjeru), eight sub-counties, 1 town council, 61 parishes and 374 villages. It is 74 Kms East of Kampala City. Kayunga is found in the central part of Uganda, bordering Mukono in the South, Jinja in the East, Kamuli in the North East, Apac in the North, Luwero in the West and Nakasongola in the Northwest.

Table 6-3 : Summary of Administrative and Political Units in Kayunga District

Administration Unit	Number in District
Counties (LC. IV)	2
Sub-counties (LC.III Rural)	8
Town Councils (L.C.III Urban)	1
Parishes/Wards (LC.II)	61
Villages (LC.I)	374

Source: Kayunga Development Plan

Jinja District is comprised of two counties - Butembe, and Kagoma; the counties are composed of 7 sub-counties, one municipality which is comprised of 3 divisions and three Town Councils known as Buwenge, Bugembe and Kakira Town Council. There are 46 parishes with 381 villages. The District is the higher local authority, while the 7 sub-counties are the Lower Local Governments (LLGs). The District Council is the highest political authority comprised of 25 members.

Table 6-4 : Summary of Administrative and Political Units in Jinja District.

Administration Unit	Number in District
Counties (LC. IV)	2
Sub-counties (LC.III Rural)	7
Town Councils (L.C.III Urban)	3
Town Boards	2
Parishes/Wards (LC.II)	46
Villages (LC.I)	381

Source - Planning Unit Jinja District

The section below details prevailing socio-economic baseline conditions in the areas to be flooded by Isimba 180 MW Hydropower plant.

6.2 Isimba 180 MW Hydro Power Project

The 180 MW Isimba HPP and reservoir will affect districts of Kayunga, Kamuli and Jinja. Table 6-5 and Table 6-6 show number of administrative structures and units affected by the project per district. The ensuing section provides a brief profile of the Districts. Also discussed is socioeconomic baseline, with a particular focus on areas and population affected by flood area, as surveyed.

Table 6-5: Counties, sub-counties and villages affected by the 180MW Isimba hydropower dam project districts

Districts	No. Of Counties	No. Of Sub-Counties	No. Of Villages
Kayunga	1	3	13
Kamuli	1	1	12
Jinja	1	1	2
TOTAL	3	5	27

Source: Primary data

In the project area, the River Nile forms the boundary between Kayunga District on the left bank, Kamuli and a small part of Jinja District on the left bank. Within Kayunga District the area directly affected by the proposed Isimba dam project lies within Busaana Nazigo and Kangulumira Sub-Counties within which lie 13 villages. Within Kamuli District, the area directly affected lies in Kisozi sub-county within which lie 12 villages. Jinja district having the least number of PAPS has two (2) villages affected in Butagaya sub-county. Administrative areas are presented in **Table 6-6**.

Table 6-6: Project Area by District, Sub-county, Parish and Village (LC I)

District	Counties	Sub-Counties	Parish	Villages
Kayunga	Ntenjeru	Busaana	Nampanyi	Nampanyi, Kireku-Nampanyi, Nakandwa
			Lusenke	Kireku-Lusenke
		Nazigo	Kati-Kanyonyi	Kiteredde, Nakatooke,and Budooda
			Kirindi	Kiwuba, Nakakonge, Kirindi, Damba
			Natteta	Wabirongo
		Kangulumira	Kangulumira	Kitambuza
Kamuli	Buzaya	Kisozi	Nankandulo	Mutumu-Nakaato, Bumegere, Namalumba, Buluba, Nabukiidi, Bupiina
			Namaganda	Isimba-Nabukiddi Nababirye-Bukasa, Buzimbye, Bubwege, and Bulamuka
			Kiyunga	Bulangira Busoke
Jinja	Kagoma	Butagaya	Nakakulwe	Buwala B, and Lumuli A

Source: Primary

6.2.1 District profiles

6.2.1.1 Kayunga District

Curved out of Mukono, Kayunga District came into existence through the merging of Bbaale and Ntenjeru counties in the year 2000. It has an area of 1,742 sq km and is bordered by Apac to the North, Jinja to the East, Luweero to the West while Mukono is to the South. The District Headquarter is situated at Ntenjeru hill, 2 km from Kayunga town. The District is divided into two regions. Ntenjeru region is located at the District Headquarter whereas Bbaale County has its headquarters at Bbaale in the northern extreme of the District. The District has 8 sub-counties, one town council headed by a Mayor. For this project only three Sub-counties (Table 6-6) will be affected.

The urbanization level was 6.7% indicating that the majority of the population lives in rural areas. Subsistence agriculture like in most rural parts of the country employs almost 96% of the population. Coffee is the main cash crop but due to the coffee wilt, its production has decreased. The main food crops include bananas, sweet potatoes, cassava, maize, beans and groundnuts. In addition, fruits (pineapples, watermelon, mangoes and passion) are grown for commercial purposes. The sub counties mainly engaged in crop farming are; Kangulumira, Nazigo and Busaana. The rest are mainly involved in livestock farming.

6.2.1.2 Kamuli District

Kamuli district is located in Western part of the Eastern Region of Uganda approximately 72 kilometres by road. It lies at average altitude of 1083m above sea level and extends from latitude 0°- 56 N /330-05‘ E to longitude 01- 20 N /330- 20‘ E. The district borders River Nile and Kayunga district in the west, Jinja district in the South, Iganga district in the Southeast, Kaliro District in the East and Soroti district and Lake Kyoga in the north. Kamuli district has a total land area of about 3,416.19 Sq. Kilometres of which 1,551.8 square km is under cultivation and 1,096.16 km ^{2} is under water.

Kamuli District is composed of three counties namely: Budiope, Bugabula and Buzaaya. The District is also composed of 17 lower local councils (Sub-counties) and one Town council, One hundred and five (105) and 1,284 villages. According to the 2002 National Population and Housing Census, Kamuli had a population of 552,665 people and now projected at 662,407 people (end of 2007, BDR) at a growth rate of 3.3% of which 52% were females. The sex ratio is 94 males per every 100 females. Average house size for the district is 5.1 persons per house hold compared to the national average 4.7 persons. The census shows that children constituted 59.5%, while the elderly constituted 1.6 per cent. Children below 18 years constituted 59% of the population, while children below 15 years constituted 53% of the population. UBOS projected the total number of children at 379,272 by the end of 2007.

6.2.1.3 Jinja District

Jinja District is located in south-eastern Uganda, approximately 54 miles (87 km), by road, east of Kampala bordering the Districts of Iganga and Kamuli in the North, Mukono in the south-west, Kayunga in the West, Mayuge in the East and Lake Victoria in the south. It lies between latitudes 0° 25' 28N and longitudes 33° 12' 15E. It has an altitude of 1167 m above sea level. It has a total land area of 767.8 sq kms. A large percentage of the land surface area 65.8 sq kms is under water as indicated in table below. Jinja is the largest metropolitan area in Jinja District and is considered the capital of the Kingdom of Busoga. Jinja District is comprised of two counties - Butembe, and Kagoma; the counties are composed of 7 sub-counties, one municipality which is comprised of 3 divisions and three Town Councils known as Buwenge, Bugembe and Kakira Town Council. There are 46 parishes with 381 villages. The District is the higher local authority, while the 7 sub-counties are the Lower Local Governments (LLGs). The District Council is the highest political authority comprised of 25 members.

6.2.2 Socio-Economic Baseline

6.2.2.1 Population

According to the 2002 population census, Kayunga district had a total population of 297,613 people, of which 143,099 were male and 151,514 female. The population is projected to be 358,800 people in 2012 of whom 173,400 are male and 185,400 female. According to the 2002 National Population and Housing Census, Kamuli had a population of 484,400 people with female population being 251,400 while male population was 233,000. The district is growing at annual rate of 3.3% and it is estimated that the population in 2011 was 740,700 people. The sex ratio is 94 males per every 100 females. Average house size for the district is was 5.1 persons per house hold compared to the national average 4.7 persons.

According to the 2002 population and housing census, the total population of Jinja district amounts to 387,573 people of which 190,329 were male and 197,244 female. The midyear projected population for 2010 was 475,700 people. The population is distributed in 46 parishes spread in 13 sub-counties. The district population growth rate stands at 3.4 percent, which is higher than the national average of 3.2 percent. Kagoma county has the largest proportion of the population at 47% followed by Bugembe county and Jinja Municipality at 35% and 18% respectively. The population size by districts within the project area is described in table below.

Table 6-7: Population size by District

District	Total Population	Affected population	
		Male (PAPs)	Female (PAPs)
Kayunga	297,613	143,099	151,514
Kamuli	484,400	251,400	233,000
Jinja	387,573	190,329	197,244

Source: Primary Data

Overall, the total population of all villages affected by the proposed Isimba dam is 2,076 people of which 968 people are in Kayunga District while 1,100 and 8 people are in Kamuli and Jinja Districts respectively. Based on the expected potential social impacts, their extent and significance, proposed Isimba 180MW dam is classified under a —Category All project. This is because Hydro Power Plant will affect property owners by way of land take, loss of structures, loss of crops, economic displacement in some cases and impact on community resources such as boreholes, schools and places of worship.

Table 6-8: Total population affected by the proposed Dam and Reservoir

District	Total Population
Kayunga	968
Kamuli	1,100
Jinja	8

Source: Primary Data

6.2.2.2 Sex of Respondents

From the field survey, it is evident that a large percentage of the household heads interviewed were male (80.1%) compared to female (19.9%) headed households (**Table 6-9**). Further analysis shows that in the entire project affected districts male respondents were the majority compared to the female. This is because they own the land compared to the women. Kamuli district registered (43.7%), Kayunga (36.2%), and (0.1%) in Jinja district. These were far greater in number in comparison to the female respondents who registered (13.6%) in Kamuli, (6.3%) Kayunga and 0.1% in Jinja district. Table below shows the break down.

Table 6-9: Gender of Respondents

District	Gender distribution in affected districts			Total
		Male	Female	
Kamuli	%	43.7	13.6	57.3
Kayunga	%	36.2	6.3	42.5
Jinja	%	0.1	0.1	0.3
Total	%	80.1	19.9	100.

Source: Primary data

6.2.2.3 Marital Status

With regard to marital status, most project affected persons were married (84.9%), followed by widowed or widowers (8.7%) and single with (4.9%) and only (1.5%) were divorced. Further analysis of the marital status at district level confirmed that the majority of respondents in Kamuli (81.2%), Kayunga (80.9%) and Jinja (75%) were married. This was followed by the widowed who registered (8.4%) in Kamuli, (9.3%) in Kayunga and (25%) in Jinja. In the entire project affected districts the widowed respondents were mainly female headed households compared to the male. Majority of the females who were widowed had lost their spouses as a result of drowning in the river while fishing and some to diseases such as malaria.

Table 6-10: Marital Status of Respondents

Marital status	Number of Respondents	Percentage
Divorced	4	1.5
Married	225	84.9
Single	13	4.9
Widowed	23	8.7

Source: Primary data

Table 6-11: Marital Status of Respondents by district and gender

District			Marital status.				Total
			Single	Married	Divorced	Widowed	
Kamuli	Male	%	7.1	68	.1	1.1	76.3
	Female	%	2.6	13.2	.6	7.3	23.7
	Total	%	9.7	81.2	.7	8.4	100
Kayunga	Male	%	5.7	75.9	1.9	1.5	85
	Female	%	1.1	4.9	1.2	7.7	15
	Total	%	6.8	80.9	3.1	9.3	100
Jinja	Male	%	-	50	-	-	50
	Female	%	-	25	-	25	50
	Total	%	-	75		25	100

Source: Primary data

From the **Table 6-12** below, results from primary data reveal that a large fraction (66.3%) of the married respondents are between the age 26-55 followed by 13% who are between 56 years and above. A very small proportion of respondents 15-25 years (4%) were also found to be married. The general view of marriage in the project affected area was that those who are married were responsible and commanded a certain level of respect within the communities where they live compared to the single who were pitied. Important still majority of male respondents especially those between 36 and above years (60%) married purposively to get care and attention from their spouses.

Table 6-12: Marital Status of Respondents by age

Age group		Marital Status				
		Divorced	Married	Single	Widowed	Total
15-25	%	-	4	2.6	-	6.6
26-35	%	0.4	19.3	1.1	0.8	21.6
36-45	%	-	27.8	0.8	2.3	30.9
46-55	%	0.4	19.2	-	1.5	21.1
56 and above	%	2.3	13	0.4	4.1	19.8
Total	**%**	**3.1**	**83.3**	**4.9**	**8.7**	**100**

Source: Primary data

From the married respondents, majority of them were found to be in monogamous marriages (63%). However, some male household heads were polygamous (18.2%). When asked the number of spouses, the polygamous males indicated have two or more spouses. The married respondents when asked the number of spouses, majority (66.3%) had one spouse, followed by 17.4% who reported to having two spouses. Table 6-14 shows, that only the male married spouses were reported to have more than one spouse as compared to the females (48.7%) who reported having only one spouse.

Table 6-13: Types of marriages

		Type of Marriage			Total
		None	Monogamous	Polygamous	
Male	%	8.6	53.2	18.2	80
Female	%	10.2	9.7		20
Total	%	18.9	63	18.2	100

Source: Primary data

Table 6-14: Number of spouses by Gender

Sex			Number of spouses							Total
			0	1	2	3	4	5	6	
Male	Single	%	8.10		-	-	-	-	-	8.1
	Married	%	-	66.5	17.4	4.1	1.	0.2	0.1	89.2
	Divorced	%	1.10	-	-	-	-	-	-	1.1
	Widowed	%	1.60	-	-	-	-	-	-	1.6
	Total	%	11.0	66.3	17.4	4.1	1.00	0.2	0.1	100
Female	Single	%	9.7	-	-	-	-	-	-	9.7
	Married	%	-	48.7	-	-	-	-	-	48.7
	Divorced	%	4.2	-	-	-	-	-	-	4.2
	Widowed	%	37.3	-	-	-	-	-	-	37.3
	Total	%	51.3	48.7	-	-	-	-	-	100

Source: Primary data

6.2.2.4 Age Distribution

Age is one of the important factors in socio-economic analysis and mitigation of project impacts as it helps to measure the dependency ratio in affected households. Primary data (Table 6-15) shows that (30.5%) of household heads affected by the proposed dam are between the age group of 36-45 years while (21.8%) are between the age ranges of 26-35 and (19.46%) are between 56 and above. These figures reveal that the majority of the residents in the settlements are young and middle age people. Furthermore primary data revealed that some of household heads between the ages of 15-25 were school drop outs. Male respondents were found to have dropped out because of the need to earn a living while the girls dropped out to get married.

Table 6-15: Age of Household Heads

Gender	Age distribution by gender among household heads					
	15-25	26-35	36-45	46-55	56 and above	Total
Male	5.7	16	24	16	14.8	76.5
Female	1.54	5.8	6.5	5	4.66	23.5
Total	**7.24**	**21.8**	**30.5**	**21**	**19.46**	**100**

Source: Primary data

Further analysis shows a great percent of household members being children and youth. Results show that the highest number household members (43%) are children less than 18 years old followed by youth between the ages of 19-35 years. Results reveal that total dependency on the affected households is high (80.5%) and child

dependency is (76.8%). These were high because of the large household sizes composed of children and youth. However, the aged dependency ratio was low (3.71%) because of the small number of the elderly living within the affected households in the project area.

This validates the (UBOS Statistical Abstract, 2012) which reveals an increase in the youth population of (56.8%) compared to that of the older persons (65 years and above which has decreased by 4.6 as of (2002)

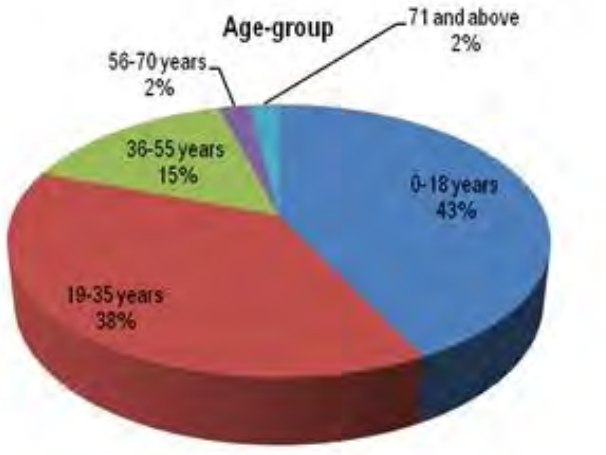
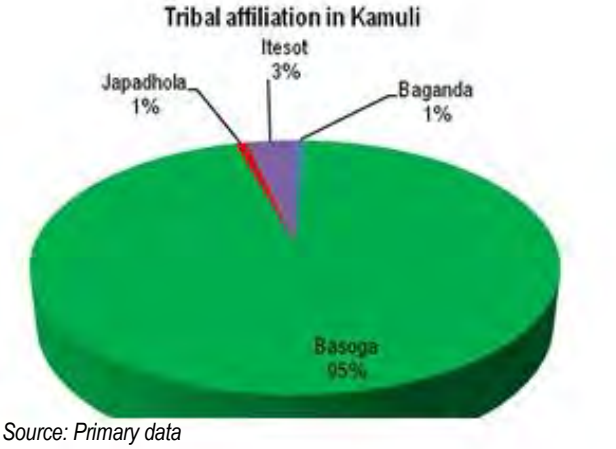


Figure 6-1: Ethnicity of Respondents in Kamuli District

6.2.2.5 Ethnicity

Ethnicity is one of the key considerations to be taken into account while designing social mitigation strategies. Kamuli district comprises of several ethnic groups due to migration trends. However the Basoga are the majority tribe. The other tribes include Iteso, Bakenyi, Banyoro and Baruli among others. There are also non-Ugandans from different countries of the East African Region and other African Countries namely - Kenya, Tanzania, Rwanda and Burundi. The predominantly language spoken in Kamuli District is Lusoga, with some Luganda and English. Within the project affected villages of Kamuli district, the dominant ethnic group is Basoga (48.3%), followed by Itestos, Japadhola and Baganda (Figure 6-2).



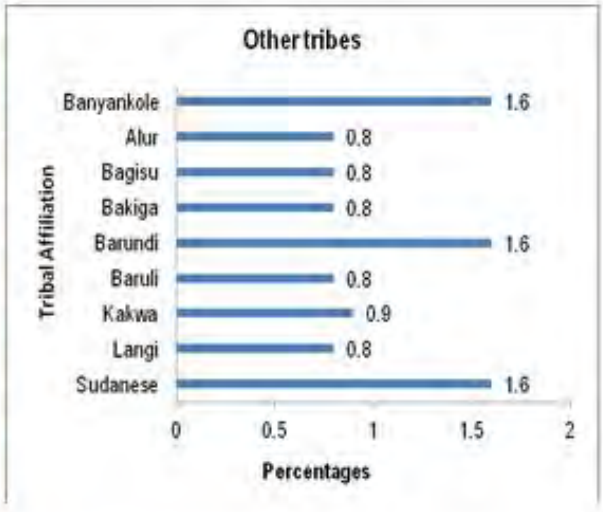
Source: Primary data

Figure 6-2: Ethnicity of Respondents in Kamuli District

Field surveys revealed that Kayunga district had a rich ethnic diversity comprising a mixture of several Ugandan tribes and other nationalities such Sudanese and Burundians. Over all, the dominant ethnic groups recorded in the project areas are the Basoga (28.1%), followed by Japadhola (13.3%), Baganda (10.2%), and Lugbara (10.2%). The other ethnic groups that account 9.7% include but not limited to Banyankole, Alur, Bagisu, Kakwa and Kayunga (Table 6-16).

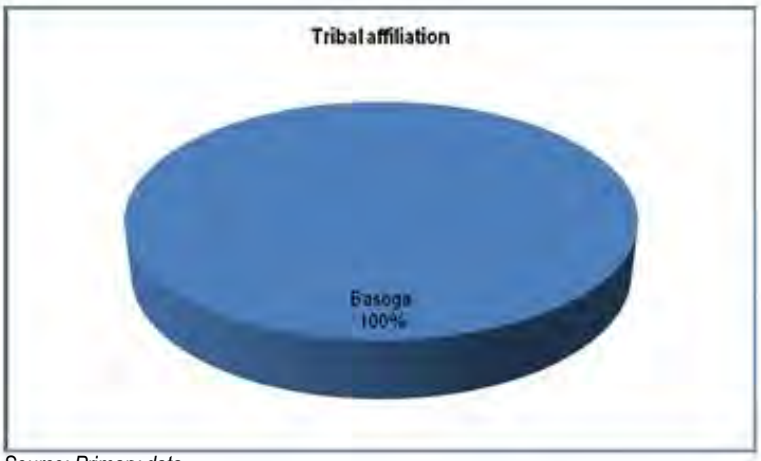
Table 6-16: Ethnicity of Respondents in Kayunga District

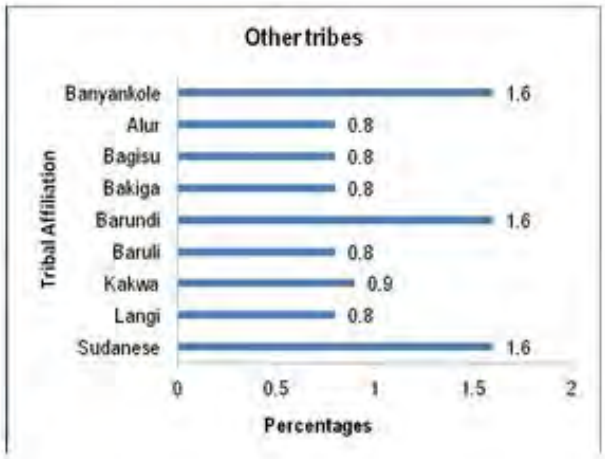
Tribal Affiliation	**%**
Baganda	10.2
Bagwere	8.6
Banyole	2.3
Basoga	28.1
Itesot	8.6
Japadhola	13.3
Lugbara	10.2
Samya	9
Other	9.7



Source: Primary data

Jinja district has a diversity of ethnic groups representing nearly all tribes in Uganda. However, 70 percent of the population likely to be affected by the proposed dam comprises of Basoga followed by Baganda at 6 percent and Banyole at 4 percent. In the villages going to be affected by the proposed dam, the prevalent tribes include Basoga and Baganda. Some Iteso, Acholi and Bagishu have also settled in the area, reasons attributed to Jinja being one of the districts with various employment opportunities in the industrial sector in the 80s. From the primary data, Jinja registered Basoga (100%) as the only tribe in the project affected area. This was because the respondents that were affected in Jinja district were only Basoga.





Source: Primary data

Figure 6-3: Ethnicity of Respondents in Jinja District

The data above shows that the project area is highly cosmopolitan with so many tribes, religions and people from different parts of the county. This indicates that the communities within the project area are highly receptive as they have already hosted other tribes from different parts of the country. However, none of these tribes can be regarded

as —indigenousll because all of them have equal access to resources and economic opportunities as the rest of the population in either their local communities or nationally without discrimination or ethnic marginalization.

Overall, Basoga were the predominant tribe (63.2%) in all the project area that will be affected by Isimba 180 MW dam.

Primary data further reveals that there were immigrant tribes and nationalities and when asked the reasons for their moving there, respondents cited various reasons such as marriage, farming, and internal displacement among others. Table below shows reasons for moving to project affected areas.

Table 6-17: Reasons for moving

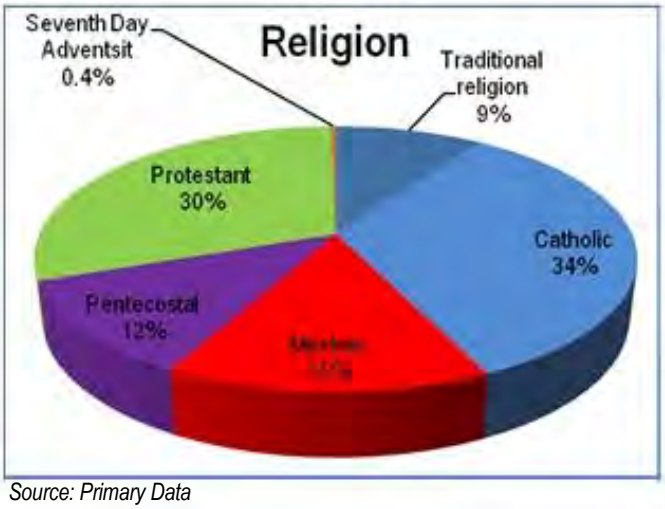
Reasons for migrating	%
Marriage	16.3
Grazing land	5.9
Farming	58.8
To find a job	2.0
Internal displacement	13.1
Trade	2.6
Other	1.3

Source: Primary data

6.2.2.6 Religion

The main religious denomination in Uganda is Catholic (42%) followed by Protestants (36%) and Muslims (12%) while Moslems make (12%) and others add up to (8%).

The majority of the respondents to be affected by Isimba Dam are Catholics (34%) followed by Protestants (30%). Other religions present are the Moslems (15%), Pentecostal (12%), while the remaining (9%) believe in African traditional religion especially in areas where cultural sites were located. However, despite majority of respondent being affiliated to the above known conventional religions, there was wide spread subtle practice of religious syncretism (Figure 6-4 below).



Source: Primary Data

Figure 6-4: Religious beliefs of the affected people

There is only one church; AGC-Uganda Africa Pentecostal in Nakakandwa village in Kayunga district that will be inundated by Isimba Hydro Power Project. Although the structure is in a fair condition (mud and wattle), the leader mentioned that it accommodates between 50 to 80 people. Below Plate 6-1 shows the church that will be affected by Isimba HPP and reservoir area.

Source: Primary data
Plate 6-1: A Pentecostal in Nakakandwa village

6.2.2.7 Education

Education is a prerequisite for good governance and sustainable national development because it transforms people into good citizens, equipped to contribute to the social-economic transformation of the nation. In general Literacy levels in the country have improved and continue to be a priority among development strategies. This is attributed to the introduction of UPE were a majority of parents are taking their children to school. Although education has improved, it is one of the largest causes of poverty in Ugandan households especially in rural areas, as it leads to reduced income generating opportunities, particularly for women.[14] However, the government has pursued policies to expand access to all levels of education system, with a special emphasis placed on primary education because it directly benefits the rural poor. Primary school enrolments have increased sharply in the past two decades, from around 2.7 million pupils in 1997 to 8.2 million in 2009, partly due to the introduction by government of its Universal Primary Education policy in 1997. As a result, net enrolment rates were 93% in 2009, close to the MDG target of 100%. However, completion rates continue to lag behind, with only 52% of pupils that start grade 1 reaching grade 7; in other words, 48% do not complete basic education (AfDB, OECD, UNDP, & UNECA, 2012) [15].

The education system in the project affected districts has greatly improved since the introduction of UPE however some areas, education is still lacking because of inadequate scholastic and instructional materials, understaffing in schools and poor remuneration of the teachers .Kamuli District has about 365 primary schools, 334 are Government aided and 31 are private or community owned. The introduction of UPE in 1997 led to significant increase in the enrolment of pupils in primary schools, none the less the dropout rates especially among the girls and orphans in particular are still a big challenge. Out of the 96,634 pupils enrolled in primary education, 48,538 are girls while 48,096 are boys. This shows that the girl child is being considered to attain education compared to the earlier years when the parents only preferred boys to go to school. In Kisozi Sub-County (the project affected SC) there are 20

[14] GOU (1999): Uganda Participatory Poverty Assessment Process. Perspective of the poor.
[15] AFDB, OECD, UNDP, UNECA 2012: African Economic Outlook 2012: http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/PDF/Uganda%20Full%20PDF%20Country%20Note.pdf

government aided primary schools and only two government aided secondary schools. Out of 7,147 pupils enrolled in primary school, 3,416 are boys and 3,731 are girls. (Kamuli DDP 2010-11 to 2014-15).

Kayunga district has 221 primary schools (167 government, 54 private); 34 secondary schools (9 government, 26 private) 2 private tertiary institutions and 1 government tertiary technical institution.

Jinja district has a total of 86 government and 52 private schools. For secondary schools, the districts has about 74 schools and of them 13 are government aided and 61 are private aided schools. The total school enrolment of pupils between 6-12 years was 77,067 which represent 90.6%. However, this doesn't provide for the completion of primary education rate. The district has put much emphasis on education of the girl child and reducing on the high rates of school drop outs in the district. According to the District abstract there 67,553 pupils with females (51.7%) being more than the males (48.3%). So far, the district has been able to improve on the school infrastructure using the government School Facility Grant (SFG), TDMS and the LGDP. (Jinja DDP)

The introduction of Universal Primary Education (UPE) in 1997 in Uganda led to a significant increase in pupils' enrolment in primary schools nationwide. However, UPE in villages to be affected by the proposed dam is characterised by inadequate parental support, low enrolment, poor performance, high drop-out rates especially by girls and orphans, inadequate classrooms, inadequate sanitary facilities and inadequate teachers' houses. The number of pre-primary school centres is very low in the Sub-counties although a significant number of parents are keen to have their children make an early start in their education.

There are only primary and nursery schools located within the project areas. The secondary schools identified were very far away from the project area except for Kamuli district. The nearest secondary schools were more than 5 kms at the left bank (Kayunga district) and less than 2 km at right bank (Kamuli and Jinja district). During the field survey, only five primary schools were identified as being close to the project area in Kayunga district while 16 schools were in Kamuli. In Jinja district respondents in Lumuli A and Buwaala village reported using schools located in Kamuli since the distances were shorter. In Kayunga district the schools identified include:

- Nakakandwa Church of Uganda Primary School,
- Nakakandwa RC Primary School,
- Nakatooke Primary School,
- Kirindi Primary School and
- Nazigo Demonstration School.

While in Kamuli district the schools identified within the project include:

- Kisozi S.D.A Primary School
- Isimba Primary School
- Kisozi Primary School
- Nile Primary School
- Lwanyama Primary School
- Bugolo Primary School
- Izanyiro Primary School
- Kiyunga Primary School
- Nakandulo Church of Uganda Primary School ▪

Matuumu Bumegere Primary School

- Nankandulo Moslem Primary School
- Matuumu C/U Primary School
- Bulamuka Primary School
- Matuumu Catholic Primary School

The secondary schools identified were only two; Buzaaya Secondary School and Matuumu Secondary School.

Nakatooke Primary School: Is a government aided school which is found in Nakatooke village, Katikanyonyi Parish, Nazigo Sub-County in Kayunga District. It is a grade 3 primary school which was started by Roman Catholic Church. The school has 10 teachers where 4 are female and 6 are male. Currently the school has 540 pupils of which 276 are boys while 264 are girls. Information from the Sub-County offices reveals that, the number of pupils at the beginning of the year is always high but it decreases day by day due to cultivation especially during the harvesting seasons as most of the parents are farmers who majorly engage their children most of the time in Agriculture and fishing.

Table 6-18: School enrolment in Nakatooke Primary School

Class	P1	P2	P3	P4	P5	P6	P7	Total
Males	83	56	40	32	27	16	22	**276**
Females	65	53	47	34	28	18	19	**264**
Total	**148**	**109**	**87**	**68**	**55**	**34**	**41**	**540**

The school has challenges that affect the performance levels. These are:

- Parent's commitment to provide basic requirement to their children like pens, books, lunch, and uniform is very low.
- Too much late coming and absenteeism of pupils.
- Lack of teacher's houses which affects the teachers' attendance.

Nazigo Demonstration School: This is a primary government school which was founded in 1984. It has a total of 558 pupils where 265 are boys and 293 are girls. It has pupils from primary one to seven and currently has 14 teachers, of which five are male and nine are female.

Table 6-19: School enrolment in Nazigo Demonstration School

Class	P1	P2	P3	P4	P5	P6	P7	Total
Males	45	42	39	40	36	35	28	**265**
Females	54	46	43	46	33	40	31	**293**
Total	**99**	**88**	**82**	**86**	**69**	**75**	**59**	**558**

Kirindi Primary School: This is another primary government sponsored school located in Nazigo Sub-county. It is a grade IV school with a staff of five active teachers where four are male and only one female. Currently there are 179 pupils in the school where 87 are male and 92 are female. **Table 6-20** show the break down from primary one to five. There are no primary six and seven classes.

Table 6-20: School enrolment in Nazigo Demonstration School

Class	P1	P2	P3	P4	P5	P6	P7	Total
Males	20	18	20	16	13	-	-	**87**
Females	28	27	12	20	05	-	-	**92**
Total	**48**	**45**	**32**	**36**	**18**	**-**	**-**	**179**

Plate 6-2: Schools in the project area

Further still, primary data shows that a large proportion (40.8%) of household members are just literate meaning that they attended primary school but dropped out of school at an early stage while (22.5%) completed primary school, followed by illiterate at (22.2%) and only (4.1%) were enrolled for secondary education (Table 6-21). Although a majority responded having attained primary school, they only attended lower primary level without completing primary seven. Low literacy is attributed to lack of school fees from their parents, long distances between homes and school. This is compounded by involvement of children in income generating activities which leads them to prefer earning a living at a young age as opposed to attending school.

Table 6-21: Highest Level of Education including Household members

Level of education	Valid Percentage
Illiterate	22.2
Just literate	40.8
Complete primary school	22.5
Complete lower secondary school	9.6
Complete secondary school	4.1
Compete technical school	.5
Some university/college	.2

Analysis of the household heads also confirms that the level of literacy is low. This is revealed by the relatively high percentages (24.4%) of illiteracy among household heads and (41.9%) of just literate for both male and female (Table 6-22). Because of the low literacy levels of the respondents, most of them obtain a living from agriculture, fishing activities and casual labour.

Table 6-22: Highest Level of Education amongst Respondents

		Level of education by gender within households									Total
		Illiterate	Just literate	Complete primary school	Complete lower secondary school	Complete secondary school	Compete technical school	Some university/college	Complete university college	Completed post-graduate	
Male	Count	162	280	157	106	53	12	16	6	0	792
	% of Total	10.8%	18.7%	10.5%	7.1%	3.5%	.8%	1.1%	.4%	.0%	52.8%
Female	Count	170	261	165	65	29	4	6	7	1	708
	% of	11.3%	17.4%	11.0%	4.3%	1.9%	.3%	.4%	.5%	.1%	47.2%

		Level of education by gender within households									Total
		Illiterate	Just literate	Complete primary school	Complete lower secondary school	Complete secondary school	Compete technical school	Some university/college	Complete university college	Completed post-graduate	
	Total										
	Count	332	541	322	171	82	16	22	13	1	1500
	% of Total	22.1%	36.1%	21.5%	11.4%	5.5%	1.1%	1.5%	.9%	.1%	100.0%

Source: Primary Data

From the Table 6-22 above it is evident that the level of education in the project area is too low and this implies that development of the project may be a challenge due to resistance from some community and in order to mitigate this problem, the project should consider designing information and awareness programs for the people and not relying only on written text but use of illustrations and other suitable information media. There should also be continuous sensitization in order for the people to understand the project.

Furthermore, low levels of education means few people having skills that are required in the construction of the proposed dam. Therefore the project should consider employing local community as casual labourers for example jobs such as blasting of rocks and clearing of vegetation.

6.2.2.8 Health

Access to health care is an important factor for people in a community and is a prominent concern in Uganda and other Sub-Saharan African countries. The health and life expectancy of Ugandans is amongst the worst in the world. The country's healthcare performance is ranked by the World Health Organization as 186th out of 191 nations.[16]

Ugandan health facilities are graded at different levels depending upon the administrative zones that they serve. Health centre grade II (HCII) facilities serve the parish level and provide outpatient care, antenatal care, immunization and outreach. Health centre grade III (HCIII) facilities serve the sub-county level and provide inpatient care and environmental health services in addition to supplying all services of health centre grade II facilities. Health centre grade IV (HCIV) facilities serve as the headquarters for health sub districts and provide surgical services, supervision of lower level HCII and HCIII units, collection and analysis of data on health and planning for health sub districts (3).

Kamuli district has 2 hospitals, 2 Health Centre IVs, 11 Health Centre IIIs, 35 HC IIs, 3 maternity centers, 2 private clinics, and 134 drugs shops (Table 6-23).

Table 6-23: Category, numbers and ownership of health units in Kamuli District

Category of Health Unit	Ownership			Total
	Government	NGO's	Private	
Hospitals	01	01	00	02
Health centre IV	02	00	00	02
Health centre III	10	00	00	10
Health centre II	23	12	02	39
Subtotal				**53**
Maternity homes	-	-	03	03
Private clinics	-	-	02	02
Drug shops	-	-	134	134
Subtotal				**139**
Total				**192**

[16] Boseley Sarah, 2008: Health in Uganda.www.guardian.co.uk/katine/2008/mar/06/katinegoalbackground.background.

In Kayunga District, there are 23 health units (19 government, 4 private not for profit) and 27 clinics including maternity centers that are not categorized under specific levels (Table 6-24).

Table 6-24: Category, numbers and ownership of health units in Kayunga District

Facility Level	Number of Facility		
	Government	Private	Total
Hospitals	01	-	**1**
Health centre IV	02	-	**2**
Health centre III	8	-	**8**
Health centre II	8	4	**12**
Total	**19**	**4**	**23**

In Jinja District, the government plays a major role in provision of health services to the population. The health units are evenly distributed in both the rural and urban areas and this has really helped in curbing mortality and morbidity situations in the district. Basically all the Jinja district health sector indicators are better than the national average which implies that they are doing at least well in terms of health though the Sero prevalence rate is just the same as the national value (6.9%).

The district has 69 health units. Of these 49 are government/ public, 17 are NGO and 3 Institutional (Army, Police, and Prisons). There is 100% health facility coverage per parish, with 100% of the population living with 5 Kilometres of a health facility. (Jinja District Statistical report 2009).

The entire project affected districts although health care services are not at their best; they have access to health facilities at their sub-counties. From the field survey, it is evident that respondents of the three affected Districts had access to health care facilities; however there were problems such as an inadequate supply of drugs, very few health personnel, lack of modern facilities for proper diagnosis and the distances to the health centres being far away from their homes. Primary data shows that in Kamuli district, there are two health centers that the PAPs access when seeking health care services (Nankandulo HC IV and Kiyunga HC II) whereas in Jinja district, people access Lumili HC II. Below is a brief description of the health centers within the project areas.

- **Nankandulo HC IV**

Nakandulo HC IV is the biggest health center within Kisozi Sub-county in Kamuli district and according to the respondents, it was the most visited HC because it offers health care facilities like fully equipped laboratory, and is fairly well staffed. Fields surveys show that the HC has one doctor, 4 clinical officers, 5 enrolled nursing officers and mid wives and one laboratory technician. The laboratory is well equipped with the capacity to undertake malaria, HIV/AIDs and dysentery diagnoses. The number of patient's attendance per day according to the clinical officer is 110 patients and the capacity to accommodate in-patients 20. However, the wards get more patients compared to what it contains. The most common diseases treated in the health center are malaria, Diarrhoea and Respiratory Tract Infections (RTIs). The challenges in the service delivery are:

i) Lack of theatre, therefore in case of emergency cases, the HC has no efficient means (ambulance) of transporting patients to referral hospital.
ii) Drug store is small to accommodate drugs
iii) Wards are small compared to number of inpatients

- **Kiyunga HC II**

This is another health center located in Kisozi Sub-County in Kamuli district. Although this was reported as the nearest (5km) HC compared to Nankandulo HC IV, not many patients go to it for health care services. It has very limited staff members. According to the health officer on duty, the health center has no doctor and hence patients are attended to by 1 enrolled nurse and 1 nursing assistant. There is no laboratory technician therefore only raid tests

mainly for malaria and HIV/AIDs are carried out. The patients' attendance is an average proportion of about 40-50 patients per day. Malaria, Respiratory diseases and intestinal worms are the common diseases recorded in the health center. Records also show that HIV/AIDs is very common with currently 140 patients registered. The challenges faced by the HC are:

i) The HC is under staffed with only 2 nurses;
ii) The HC conducts emergency deliveries however there are no maternity kits;
iii) Lack of electricity;
iv) There is no running water, the borehole is very far.

- **Lumuli HC II**

This is a HC II located in Butagaya Sub-County in Jinja district. The 8 PAPs who were only going to be affected in Jinja district reported to use this HC when seeking medical care. The services are not any different from other HC IIs. It also has very limited staff members with only one enrolled male staff and no doctor. The number of patients per day is 30 with no in-patient. The HC has a mini laboratory with a capacity to undertake malaria and HIV/AIDs tests. The major challenges faced are lack of water which makes hygiene a big problem especially the pit latrines, and lack of accommodation for staff members. The major diseases affecting the people include; malaria, Respiratory Tract Infections (RTIs), worm infestations, pneumonia mainly in children and Urinary Tract Infections (UTIs). HIV/AIDs prevalence was reported to be low.

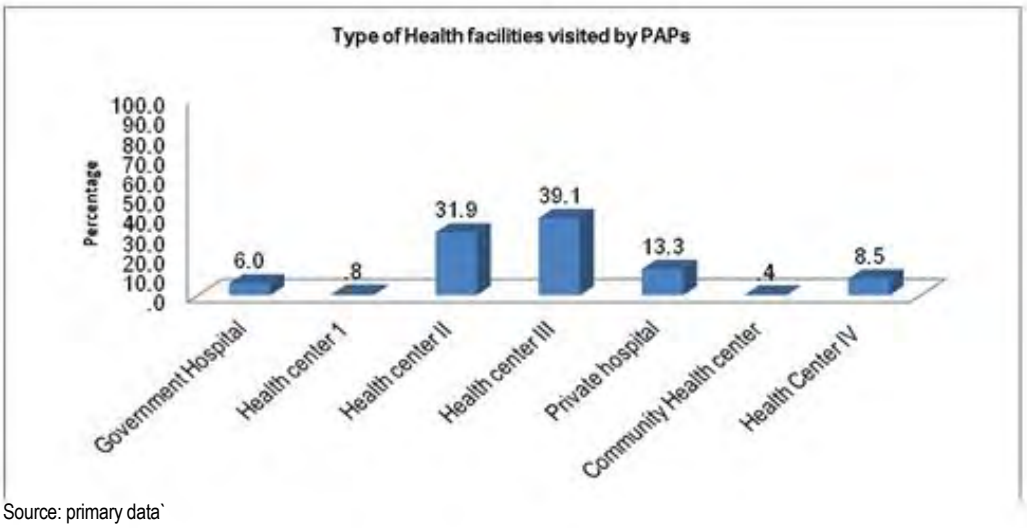
Plate 6-3: Lumuli HC II Butagaya Sub-County in Jinja District

Busaana HC III located in Busaana Sub-County and Bukamba HC II in Nazigo Sub-county in Kayunga district, are the two Health Centers that provide health care services in the project affected areas. Busaana HC III (Plate 6-4) is one of the highly populated HC in Kayunga district. Although it does not have a doctor, it is well staffed; there are two clinical officers, two mid wives, four nurses, two nursing assistants and two laboratory technicians. According to the health center in charge in Busaana HC III, there is a well-equipped laboratory according to local standards with a capacity to undertake HIV/AIDs, Tuber- Colossi malaria and dysentery diagnoses. The daily attendance is of patients is high, that is approximately 100 to 200 patients. HIV/AIDs was reported to be very high with currently having 912 patients, 30 of which are children. Male were reported to be more infected than the women. The most common diseases affecting the population are malaria which is the major killer disease followed by RTIs, sexually Transmitted Diseases (syphilis and Gonorrhoea).

Plate 6-4: Busaana HC III in Busaana Sub-County in Kayunga District

Bukamba HC II located in Nazigo Sub-County in Bukamba village is another health facility that some respondents visited while seeking health care. Because of the lack of some medical equipment, personnel and drugs, it is visited by very few people. According to the health center nurse, the facility has two enrolled nurses, two nursing assistants, there is no laboratory although the undertake raid malaria and HIV/AIDs tests. Like any other health facility, Bukamba HC II records malaria, RTIs, pneumonia and trauma (accidents) as the major illnesses affecting the population.

Primary data (**Figure 6-5**) shows that majority of respondents use health centres III and II situated in their subcounties. Five local health centres, serve the population of the project areas. On the left bank of the River Nile (Kayunga District), is Busaana Health centre III and Nazigo Health centre III which majority of respondents go to while on the right bank is Nankandulo HC IV and Kiyunga HC II in Kamuli district and only Lumuli HC II in Jinja district. However respondents also revealed attending health care services in private clinics , drug shops and the major Hospitals (Kayunga and Jinja hospitals) in case of complicated illnesses.



Source: primary data`

Figure 6-5: Health facility visited by people

The common diseases reported by respondents interviewed are malaria (96.8%), respiratory tract infections (0.4%) including flu and cough and measles (1.6%). Further analysis shows that amongst the children, Malaria (84%), cough and flu (14%), measles (0.2%) and diarrhoea were seen as the commonest diseases as shown in Table 6-25 below.

Table 6-25: Common Diseases amongst Respondents

Most common diseases among respondents	Percentage
Malaria	96.8
Respiratory Tract Infection	0.4
Measles	1.6
Other	1.2

Source: primary data

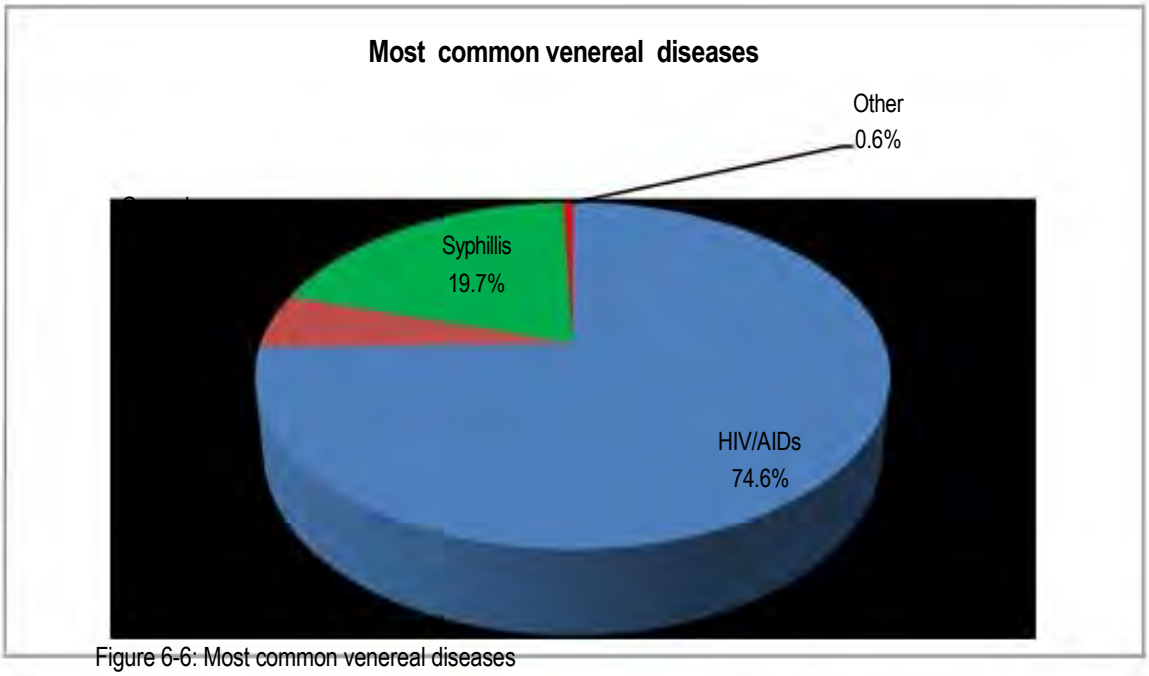


Figure 6-6: Most common venereal diseases

Further analysis (**Figure 6-6**) shows that STDs such as syphilis (19.7%) and HIV/AIDS (74.6%) are also very common though people do not take the diseases seriously. When asked the major causes (**Figure 6-7**) of the most common disease majority (94.1%) attributed it to irresponsible sexual behaviour,(0.6%) mother to child infection,(1.0%) blood transfusion , and (1.3%) sharing of sharp instruments.

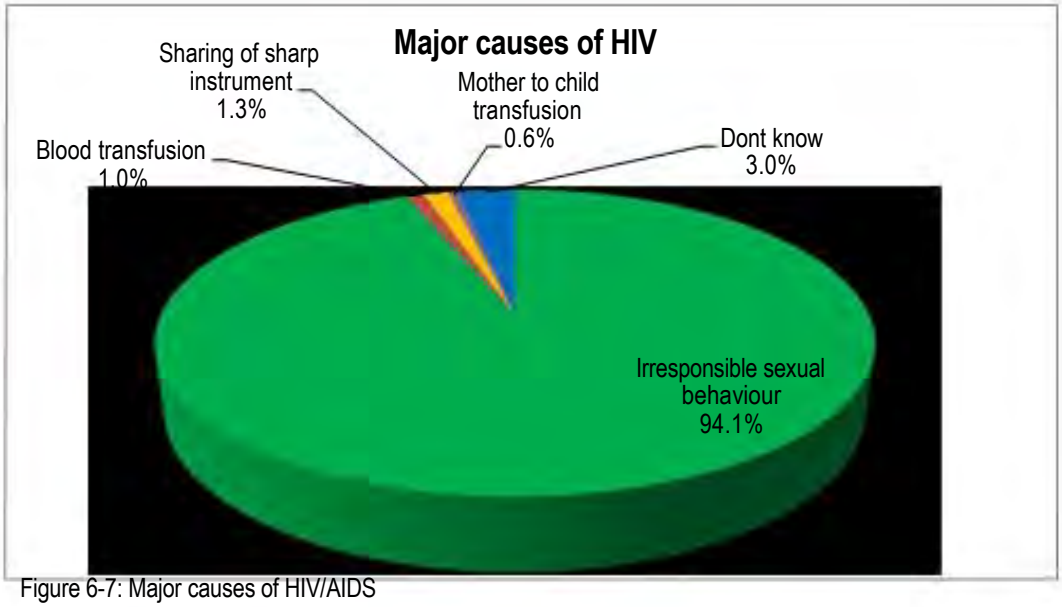


Figure 6-7: Major causes of HIV/AIDS

Distance to a health facility has a strong impact on accessing health care which in turn affects the outcome of any health complications. Access to services such as health, along with types of illnesses is also a measure of poverty and wealth levels in a community or specific area. According to the Ministry of Health the recommended maximum distance to the nearest health facility is 5 km. **Figure 6-8** below shows that a big percentage (51%) of respondents walk 2.5- 5km to the nearest health facility while only (34 %) go between 5 to 20 kilometres to get health care.

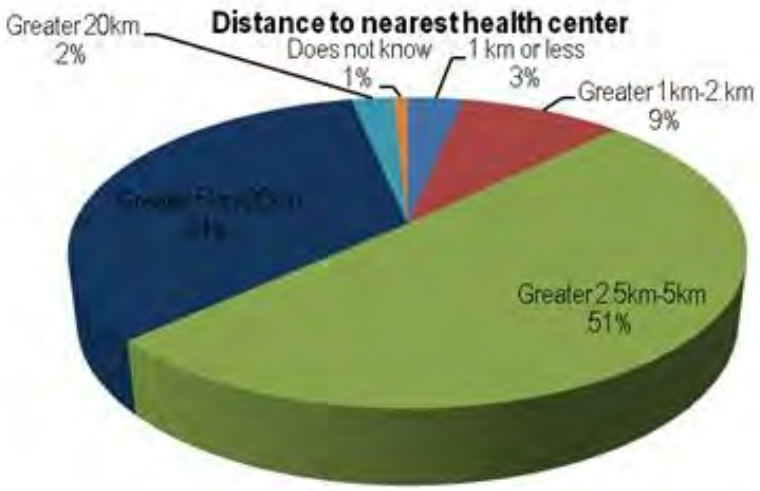


Figure 6-8: Distances to the nearest Health Center

Table 6-26: Distances to the nearest Health Center

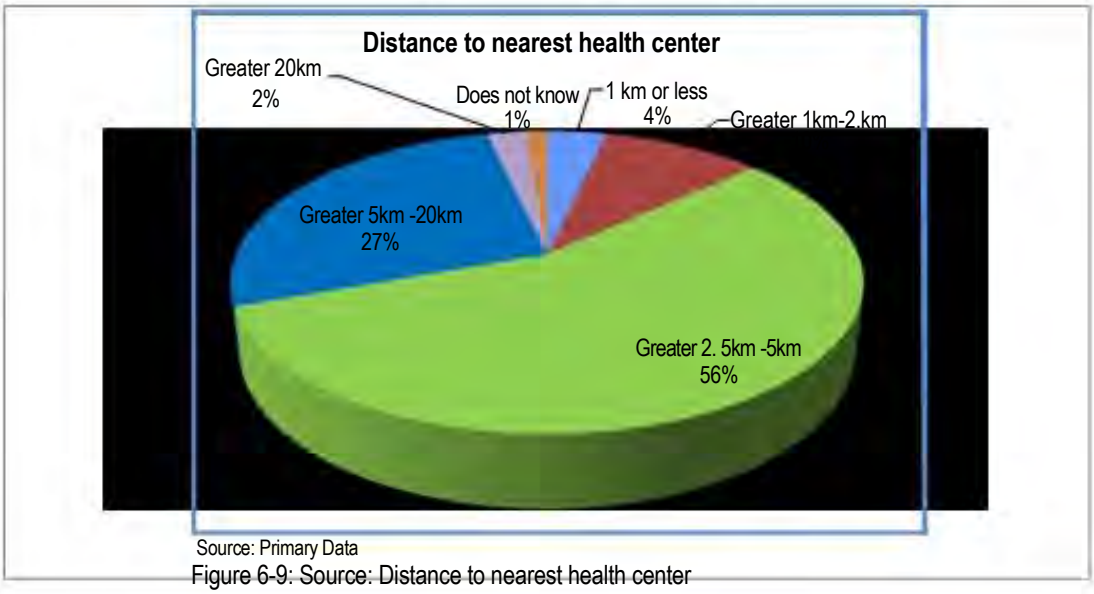
District		Distance to health center by district						Total
		1 km or less	1 km-2 km	2.5 km-5 km	5 km-20 km	Greater 20 km	Does not know	
Kamuli	%	0.8	4.7	24.1	17.4	1.6	0.4	49.0
Kayunga	%	2.4	4.3	25.7	15.8	0.8	0.4	49.4
Jinja	%			1.6				1.6
Total	%	3.2	9.1	51.4	33.2	2.4	0.8	100.0

Analysis of distances travelled by respondents at district level reveal that (24.1%) in Kamuli and (25.7%) in Kayunga travel longer distance to get access to medical facilities. Only a few of the respondents (0.8%) in Kamuli and (2.4%) Kayunga reported travelling shorter distances of 1 km or less to get to health centers.

From the field survey majority of respondents (61.1%) revealed using boda-boda (commuter motor cycles) as the main means of transport and (21.1%) walked to these health centers. Further analysis of distance travelled by means of transport means show that wide range of transport means is used and these range from bicycles to automobiles. From field survey majority of respondents (34.8%) used boda-bodas to travel the journey of (Greater 2.5 km-5 km) and 21.5% also used boda-bodas to travel (Greater 5 km-20 km).

Table 6-27: Mode of transport

Distance travel		Means of transport				Total
		Walk	Bicycle	Boda-boda	Car	
1 km or less	Count	3	0	4	1	8
	% of Total	1.2%	.0%	1.6%	.4%	3.2%
Greater 1 km-2 km	Count	10	5	8	0	23
	% of Total	4.0%	2.0%	3.2%	.0%	9.3%
Greater 2.5 km-5 km	Count	26	10	86	4	126
	% of Total	10.5%	4.0%	34.8%	1.6%	51.0%
Greater 5 km-20 km	Count	11	17	53	1	82
	% of Total	4.5%	6.9%	21.5%	.4%	33.2%
Greater 20 km	Count	2	0	0	4	6
	% of Total	.8%	.0%	.0%	1.6%	2.4%
Does not know	Count	0	0	0	2	2
	% of Total	.0%	.0%	.0%	.8%	.8%
Total	Count	52	32	151	12	247
	% of Total	21.1%	13.0%	61.1%	4.9%	100.0%

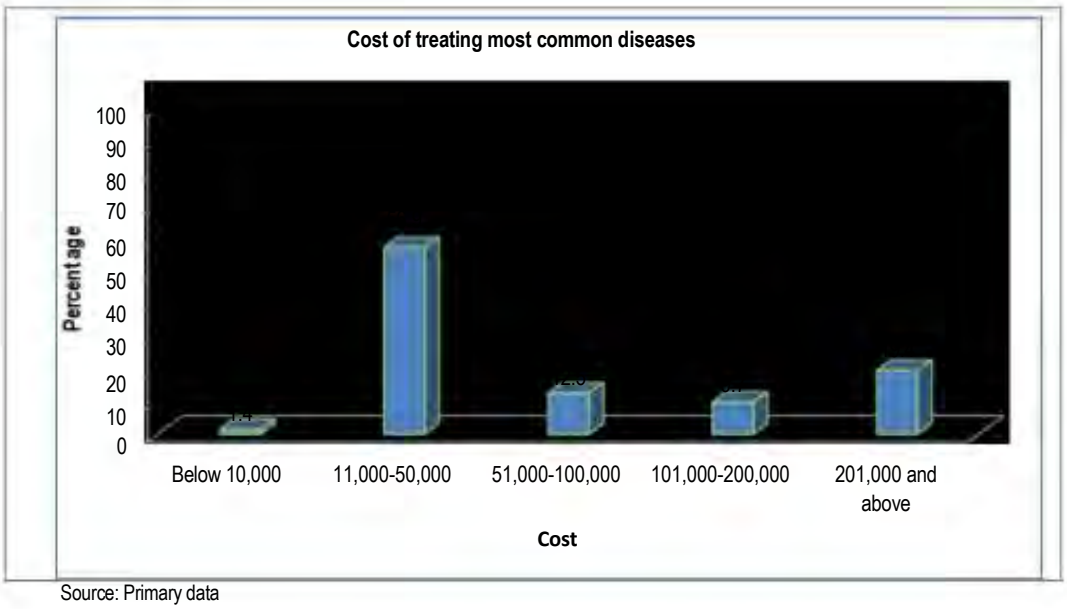


Source: Primary Data

Figure 6-9: Source: Distance to nearest health center

On the cost of treatment, (56.9%) reported that they spend between UGX 11,000 to 50,000 a month and (1.4%) spend below UGX 10,000 (**Figure 6-10**). Health care is supposed to be provided free of charge by Government health facilities but due to the unavailability of drugs and lack of qualified personnel, most people go to the Health

facility to get prescription and end up in the drug shops or private clinics to buy the drugs. Given the average household monthly income of less than UGX 100,000, this kind of expenditure on health care alone leaves the family with almost no income to cater for other expenses hence making them financially vulnerable.



Source: Primary data

Figure 6-10: Cost of treatment

6.2.2.9 HIV/AIDS

Uganda is one of the least urbanised countries in Africa, with over 80 percent of the population living in rural areas. About 40 percent of the population is below 15 years of age. In an estimated total population of 24 million, 1,050,555 million people living in Uganda are estimated to have HIV/AIDS. About 120,000 have developed AIDS. With regard to HIV/AIDS Uganda has already achieved the millennium development goal (MDG) target of reversing its spread, with the rate of adult prevalence standing at 6.4%. However, recent research shows an upward trend in new infections since the 1990s, with up to 130,000 newly HIV-infected people in 2010 (*African Economic Outlook 2012*). This situation is partly due to the prevalence of high levels of risky behaviour, with condom use during sexual intercourse dropping from 39% in 2000/01 to 35% in 2005/06 for women and from 61% to 57% for men during the same period.

Nearly 80 %of those infected with HIV are between the ages of 15-45 years, the most economically productive age group and often supporters of families. Adolescent girls between 15-19 years are 4-6 times more vulnerable than their male age mates. Children have felt a gruesome impact. About 2 million children of less than 18 years are orphans with one or both parents dead. They experience orphan hood at an age when parental guidance and socialisation is most desirable. The quality of care, education, nutrition and socialisation among these children is often poor.

Although Uganda has made great progress in HIV/AIDS service delivery and prevention since the advent of the epidemic in 1982, HIV/AIDS remains a major health concern in Kamuli District. By December 2010, HIV testing and counseling services were provided in all the 16 eligible health facilities in Kamuli District including 2 CSOs overall, 12, 234 (7,555 Females and 4,679 Males) clients were counseled, tested and provided with HIV results between October 2010 & December 2010, with 5.3% of the clients testing HIV positive. In the same period, 6,083 of pregnant women were counseled to take an HIV test, 97% tested for HIV, 163 (2.8%) of pregnant women tested HIV positive at ANC and 87 had known HIV positive result, 78%(195) of all positive pregnant women (250) were given ARV prophylaxis (STAR-EC quarterly reports- Oct - Dec 2010) from 15 eligible PMTCT sites. However, albeit the above achievements recent evidence suggests that the epidemic has shifted from the single younger-aged individuals to

older individuals aged 30-35, who are married or in long-term relationships. Multiple concurrent partnerships, extramarital relationships, discordance and non-disclosure are among the key factors driving the spread of HIV not only in Kamuli District but in Uganda as a whole.

According to Kayunga DDP 2010/2011 - 2012/2013, HIV/AIDs is reported to be very high (17-22%) compared to the national prevalence rate however, the district is coming up with activities aimed at combating the spread of HIV, mitigation of effects of HIV/AIDS in the district and the strengthening of the institutional framework and capacity building for staff to handle the epidemic. The district scaled up the centres offering Prevention of Mother to Child Transmission of HIV (PMTCT) from to 3 health centres to 11 centres currently. The units offer free HIV counselling and testing (HCT) using Rapid test. It is currently running a Home to Home HIV counselling and Testing programme with support from two partners namely; Makerere University Walter Reed Project (MUWRP). HIV/AIDS prevention has continued to be a priority area for the district and has education programmes involving community health education, drama shows, youth in schools and out of school programmes, and programmes for high risk groups like fishermen.

Information from the health centers (refer 5.2.2.8) in the project area reveals that HIV/AIDS epidemic is steadily. Although it was difficult to ascertain how many were infected with disease during interviews with respondents, those who managed to reveal said that HIV/AIDS is a very big problem and some are ignorant about it. More still, during the focus group discussion, women complained of their husbands having more than one sexual partner hence increasing on the prevalence rate. According to some women, money was the pushing factor for most of the men especially after harvesting of their crops.

6.2.2.10 Livelihoods and Occupation

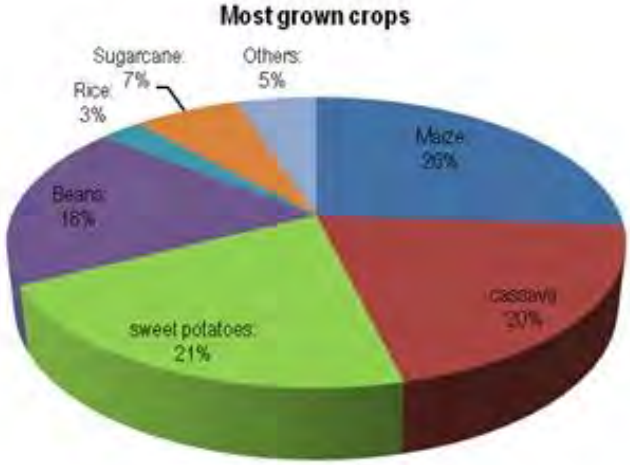
Like majority of districts in Uganda, land in Kayunga, Kamuli and Jinja districts is mainly used for agricultural purposes on both small and large scale for domestic and commercial purposes. In Kamuli district, over 80% of the population depends on agriculture for their livelihood. Coffee is the major traditional cash crop although it has faced serious threats especially the coffee wilt disease. Banana is the staple food but it is facing diseases like banana bacterial wilt, black sigatoka, fusarium wilt and streak virus. Livestock production is relatively low due to lack of improved breeding stocks, endemic diseases (Tick-born and trypanosomosis) and due to poor livestock production techniques.

Kayunga district is not different from Kamuli district although a bigger percentage (96%) compared to Kamuli practice agriculture. Coffee is the main cash crop but due to coffee wilt, its production has decreased. The main food crops include bananas, sweet potatoes, cassava, maize, beans and groundnuts. In addition, fruits (pineapples, watermelon, mangoes and passion) are grown for commercial purposes. The sub counties mainly engaged in crop farming are: Kangulumira, Kitimbwa, Kayonza, Nazigo, Kayunga and Busaana. Fishing is done in the northern part of the district along L. Kyoga and River Nile. Other parts of the district (Kangulumira, Nazigo and Kayunga) engage in fish farming. The major fish catches include: - Tilapia and Nile perch. Livestock farming is carried out in Ntenjeru and Bbaale counties; animals mainly reared include cattle, goats and pigs.

According to Jinja District Statistical Abstruct, the major source of livelihood in Jinja district is employment income, trading, property income and subsistence farming. Jinja once the most industrialized town in Uganda boasts of various Industries whose revamp will go a long way in alleviating socio-economic status of residents. The major industries now include 4 Fish Processing Plants, BIDCO, Steel Rolling Mills, Grain Millers, 1 tannery, BAT, 2 Steel Rolling Mills, PAPCO industries, and UPL-UGANDA Pharmaceuticals Ltd.

Subsistence farming is the principal source of livelihood and majorly within the areas surveyed. Respondents reported growing a variety of crops ranging from food crops like maize, rice, sweet potatoes, beans, cassava, ground nuts and others and cash crops like coffee, sugarcane, pineapples and bananas. Given the mixed nature of agriculture in the project area, majority of the households were found to be growing different kinds of crops and also

rearing animals in some cases. Maize was the most highly grown crop (Figure 6-11) among household (26%), followed by sweet potatoes (21%), cassava 20%), beans (18%), Rice (3%), sugarcane (7%) and others (5%). The above mentioned crops doubled as both cash and food crops.



Source: Primary data
Figure 6-11: Crops grown

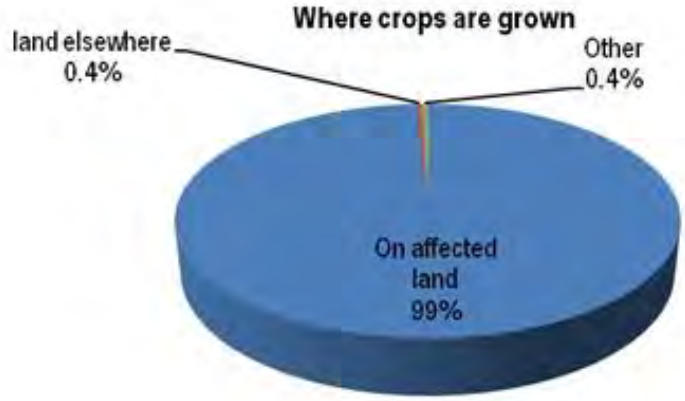


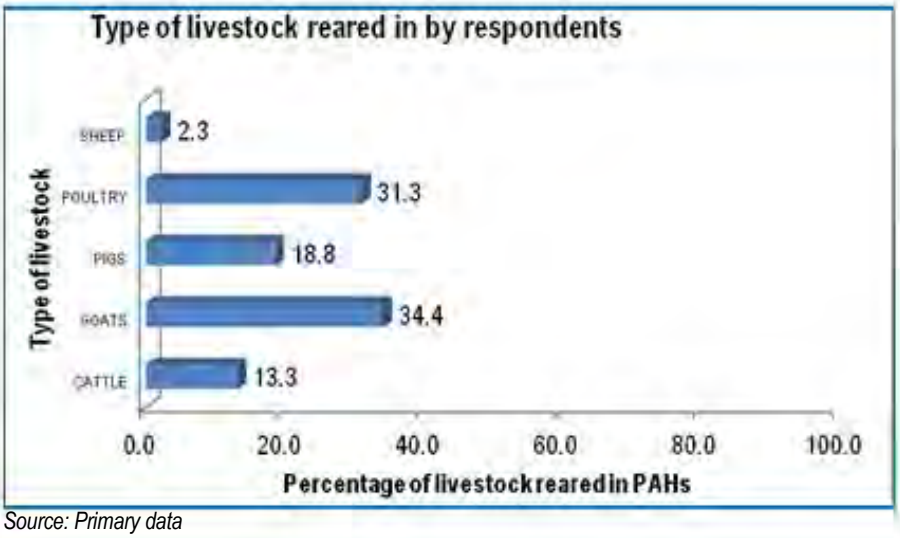
Figure 6-12: Where crops are grown

Respondents revealed that income from agricultural produce is used for procurement of domestic requirements such as sugar, salt, and soap. More to this the income earned helps to finance education for their children as well as access to healthcare services.

More to this respondents reported planting a variety of trees on their land. Trees are planted for a wide range of reasons including: to demarcate plots; provide shade and windbreaks; to provide a source of fuel and building materials; to produce fruit for sale and household consumption; to provide fodder; for herbal or traditional medicine, and, to improve soil moisture and fertility. The main fruit trees are jackfruit, avocado, mango, oranges and pawpaw. Other trees include muvule (Chlorophora excelsea), pines, mugavu, musambya (Markhamia platycalyx or Macadanua lutea), Eucalyptus spp., musisi (Aesopsis emini) and Leucaena spp.

Livestock farming (Figure 6-13) is also practiced within the project area but done on a small scale with most households not keeping more than 5 cows, goats and poultry except for one individual in Nakandwa village that rears cows, goats, pigs and poultry on a medium scale. The most common livestock are cows, goats, pigs and poultry.

According to the respondents, very little income is got from selling livestock and this is mainly because they are reared at a small scale.



Source: Primary data

Figure 6-13: Livestock reared

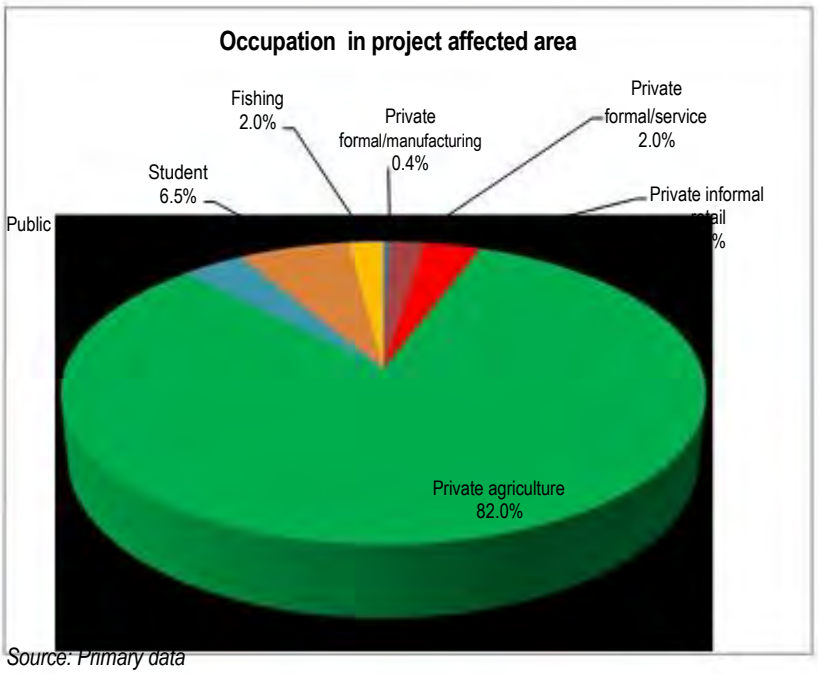
Consultation with affected persons revealed that subsistence farmers selling their surplus produce earn as much as 3,000 per day or as little as UgShs 1000 per day depending on the season and type of crops sold.

More to this, consultation with respondents revealed that there is a clear subdivision of responsibilities between men and women with regard to farming. Women are responsible for food supply including planting, weeding, harvesting, collection of firewood and the preparation of meals as well as childcare, fetching water and household tasks. They generally do more work than men who are responsible for cash income including cash crops, trading and providing income from other activities. They also clear the land and are responsible for building houses and looking after trees and animals. Despite the hard work, women generally do not own family land but merely have access to it. This has inhibited women's economic advancement by blocking avenues to credit schemes due to lack of collateral security to access them.

6.2.2.11 Occupation

a) Farming

Agriculture employed the majority of respondents in Districts to be affected by Isimba Hydro Power Dam (Figure 6-14). A vast majority of respondents when asked their main occupation revealed farming and they further explained that it is their main source of income and it‘s through farming that they have taken children to school and looked after their families. 82% of the respondents stating that they rely on sale of agriculture products such as coffee, Maize sweet potatoes, Bananas, Rice, soya, vegetables, fruits, poultry, pigs, goats among others. Since agriculture is the main stay of Uganda‘s economy, moreover a large proportion of respondents are rural based, it was reported that it contributed to household income. The rest is attributed to other economic activities like fishing, sand mining and small scale business on land elsewhere. In the trading centres, some respondents reported being employed in other small businesses such as mechanic, transportation (—boda bodall) business and retail shop businesses.



Source: Primary data

Figure 6-14: Main Occupation

Although farming is highly practised in the project area, farmers are faced with challenges. Because families practice subsistence agriculture on small plots of land, their target is to produce enough food to feed their families until the next harvest. In many cases they fall short of their target. Often, the yields are not enough to feed the family until the next harvest leading to food shortages in homes. This has greatly been attributed to the lack of enough tools,poor farming methods, prolonged droughts, pests and diseases. More still, since agriculture is the source of income, food and general livelihood for these rural farmers, under circumstances, they are faced with situations where they have to sell part of their produce to cater for emerging (basic) needs such as; access to health facilities, pay for school fees, rent, and provide for their families hence worsening food shortages. In many cases they sell their produce at very low prices because the market is not readily available plus the middlemen exploit them because they are desperate to sell.

During field surveys, farmers reported facing various challenges in farming practices and these include the following:

Poor methods of farming: While a small percentage of farmers remains particularly conservative and not willing to advance or modernize their farming methods, many rural farmers have not been sensitized about improved methods of farming. As a result, such practices like cultivating up and down the slopes leading to massive soil erosion, over cultivation, not giving soil enough time to regain fertility among others, growing the poor local breeds/ local crops which cannot survive under poor weather conditions and more prone to pests and diseases.

On the same note, modern farming equipments also remain very expensive for one subsistence farmer to afford.

Limited Land: Some of the respondents reported having very small pieces of land or no land of their (the liciencees). And yet with big families. Usually these small plots do not provide enough space for them to practice large scale farming. As the families and communities expand, the rate of production remains the same and sometimes the yields become smaller due to natural factors. In essence, the produce is much less than the subsistence and market requirements.

Low productivity: As stated earlier, the small plots of land and mentality of subsistence farming coupled with poor methods of farming can only permit low productivity. Farmers use labor intensive techniques using rudimentary tools like hoes, pangs and axes which limit their productivity. In addition many farmers don‘t have access to crops and/

seeds at the beginning of the season. This is mainly because most of the seeds are either consumed or spoilt by the pests and often nothing is spared to be planted for the following season. This is a problem because the farmers cannot reach their full potential and as a result many farmers remain poor as they barely produce enough to feed their families.

Gender imbalance/ inequality: Issues of domestic violence and gender inequality are still very common in the project affected villages. The men in most cases dictate what the women grow on the family plots. As if that's not enough, they want to be in charge selling the surplus of the total produce. This means that they control the cash flow in the families and in many cases they first full fill their needs; usually alcohol and setual relations.

b) Fishing

Fishing was more done on the left bank, in seven villages; Nampanyi, Nakakandwa, Kitterede, Naluganga, Nakatooke, Kirindi and Natogonya. Fishermen per village ranged between 9 and 25, Nampanyi village having the highest number.

The fishing gear used include; Gillnets, castnet (Ponyoka), longline (Mugonjo) and line and hook (Ddobo). According to the fishermen, gillnets —4ll and longline are usually laid in the evening and left overnight because fish is mostly caught at night. Themajor types of fish caught by fishermen included; Tilapia (Ngege) which weighbetween0.3 to 1.25 kg, Nile perch/ Mputa (0.6 to 2.5 kg), Barbus/ Kisinja (0.4 to 1.5 kg), Bagrus/ Semutundu (0.25 to 0.8 kg) and catfish/Male (0.3 to 0.8 kg).

During the focus group discussion with fishermen, they reported that fish caught is immediately solid at landing sites and not enough to meet local demand, therefore no storage, processing and marketing facilities required. Fish sales range between Ug shs 45,000 and 100,000 per day.

Plate 6-5: Fishing an economic activity in Nampanyi village, Kayunga district

c) Sand mining and Stone quarring

Sand mining (**Plate 6-6** & Plate 6-7) was also identified a source of livelihood in Kiwuba village (Kayunga district) and Bulangira- Bukose in (Kamuli district). During field survey, some respondents especially those who are into mining business reported that it is a profitable business which has attracted both men and youth who have opted dropping out of school. On the banks of river Nile both in Busaana and Kisozi Sub-County, in Kayunga and Kamuli district respectively, children usually descend in the middle of the waters, scoop the sand which they transport on the boats

to the river banks from where it's sold at between Shs150, 000 (USD 57) and Shs180, 000 (USD 69) depending on the size of the lorry truck to be loaded. Most of the sand mined is sold to contractors and individuals who use it for construction works.

Plate 6-6: River sand quarrying in Bulangira-Bukose in (Kamuli district).

Plate 6-7: Sand quarrying in Kiwuba village, Kayunga district

6.2.2.12 Infrastructure

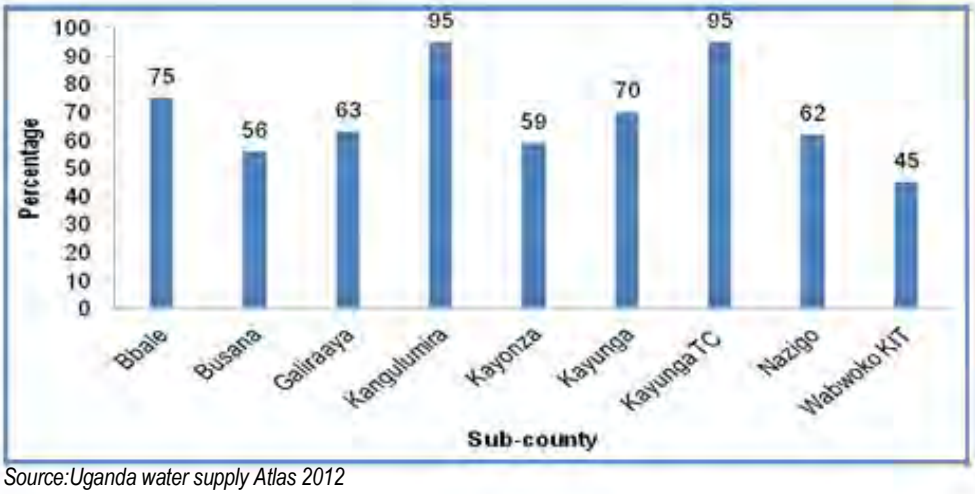
Access to social services and infrastructure are some of the indicators of wealth, poverty and vulnerability. Access to services measured include, water and sanitation, roads and energy sources. These are explained below.

- **Water and sanitation:**

Water is a key strategic resource, vital for sustaining life, promoting development and maintaining the environment. Access to clean and safe water and improved sanitation are very crucial to the health population and therefore have a direct impact on the quality of life and productivity of the population. According to UBOS Statistical Abstract 2012, the Directorate of Water Development (DWD) supplies water especially in the rural areas and small towns through the provision of boreholes. Over the years, there has been a general increase in the amount of water supplied by DWD. In 2009/10, DWD supplied about 3.6 million cubic metres and in 2010/11, it supplied 3.9 million cubic metres registering an increment of 11 percent. It is worth noting that the amount of water supplied to small towns has tripled since period 2006/07.

According to World Bank report published in 2012, the Improved sanitation facilities; rural (% of rural population with access) in Uganda was last reported at 34 in 2010. Access to improved sanitation facilities refers to the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained. This page includes a historical data chart, news and forecasts for Improved sanitation facilities; rural (% of rural population with access) in Uganda.

In Kayunga District, access rates vary from 45% in Wabwoko Sub-County to (95%) in Kangulumira Sub-County and Kayunga Town Council (Figure 6-15). In Busaana and Nazigo Sub-Counties were the dam will be constructed, access range from 56% and (62%) respectively. Likewise in Kamuli District (Figure 6-16), access rates vary from 31% in Kidera Sub-County to 95% in Kamuli TC. In Kisozi Sub- County access rate is at (62%).



Source:Uganda water supply Atlas 2012

Figure 6-15: Access to water in Kayunga District

Source:Uganda water supply Atlas 2012

Figure 6-16*:* Access to water in Kamuli District

Despite Uganda's being well endowed with significant fresh water resources, the challenges of rapid population growth, increased urbanization and industrialization, uncontrolled environmental degradation and pollution are leading to accelerated depletion and degradation of the available resources.

Since most of the settlements to be affected live close to the bank of River Nile, the common source of domestic water was the river (73.5%), followed by communal boreholes (21.7%). Some respondents who live near trading centres reported using tap water, protected wells and springs (Table 6-28). Kayunga district had more bore holes (98.2%) compared to Kamuli district (51.7%). In Kamuli district, shallow wells were commonly used however, since the distances to the bore holes were far some people preferred going to the River Nile to get water for domestic use. According to women interviewed during focus group discussions, majority revealed using water from the river for bathing, drinking, cooking food and washing clothes. During the survey is was observed that some men bathed at the rivers whereas women carried water on their heads from the rivers to their homes for domestic use such for their husbands to bath, cooking, bathing small children and washing utensils. Many children also go to the rivers to collect water and to swim/bath. Most women wash cloths from the rivers to reduce water collecting trips they have to do (**Plate 6-8**). Some even wash utensils from there.

Table 6-28: Source of Water

Source of water	Percentage
Protected well	1.5
Borehole	14.1
Tap water	1.2
River	77.5
Spring	5.7

Source: Primary data

From the field survey, it was observed that water is scarce and the wells and unprotected springs are not protected; therefore these sources should be protected from contamination during construction of the dam.

Plate 6-8: Women washing clothes in River Nile

One of the barriers to the use of safe water is long distances to the water sources. Frequently people have to collect water from distant locations. This burden falls mainly on women and children, who are the most vulnerable members of society. The long distances they travel significantly reduce their productive time and subsequent contribution to the economic development of the country. In the project area, 55% of the households are within 100-500 meters from the nearest water sources; very few (3.8%) have to travel between 1-1.5 kilometres in search for water (Table 6-29).

Table 6-29: Nearest Distances to the Source of Water

Distance to water source	Percentage
100 meters	16.5
100-500 meters	58.2
1-1.5 km	22.4
Over 5 km	3.0

Source: Primary data

Pit latrines are used for human waste disposal in most households however, some respondents revealed having no latrines as they use communal pit latrines or share with ones near schools. From the primary data collected, (96.4%) of the respondents use pit latrines while the remaining either share a communal pit latrine or dig a hole (2.4%). Although most of the PAPs had pit latrines most of them were in a dilapidated state and keeping them clean is a big challenge and it's because of this poor hygiene that many people suffer from diarrheal diseases like cholera, dysentery and Typhoid as well as fungal diseases like Candida which can easily be spread from one person to another.

Table 6-30: Disposal on Human waste

Dispose of human waste	Percentage
Pit latrine	98
Hole in ground	1.2
Communal pit latrine	0.4
Other	0.4

Source: Primary data

- **Energy**

The accessibility to electricity in Uganda is still low however, the energy sector has continued with its priorities of increasing electricity generation capacity and transmission, increasing access to modern energy services through rural electrification (MEMD Joint Sector Review 2012). The energy sources are predominantly fuel wood and

charcoal. Fuel wood and charcoal are the most prevalent energy sources at both supply and demand levels. The energy mix comprises of biomass (92%), petroleum (6%) and about (2%) electricity (NEMA, State of Environment Report 2010, 2010). According to the NEMA State of the Environment Report 2010, Uganda's internal energy potential is high but comprises of largely undeveloped hydro, mini hydro, solar, biomass, geothermal and peat resources. Biomass accounts for more than 92 percent of Uganda's primary energy supplies, while imported fossil fuels and electricity supply only 4.1 and 1.3 percent respectively. This therefore implies that Uganda is an energy poor nation with limited access to modern sources of energy particularly electricity. The high dependence and escalated harvesting of biomass has put a lot of pressure on the country's natural vegetation and has triggered massive deforestation. This pattern of energy dependence on biomass is a major threat to the country's economic development. FAO estimates that Uganda looses 50,000 hectares (0.8 percent) of its forests every year. This is particularly a big problem in the forests outside the protected area estate.

In the rural areas, electrification coverage is still very poor with less than 2% of the rural population having access to the national grid. Rural people are still an important majority in Uganda with about 88% of the population residing in rural areas. Their main source of energy both for cooking and at times lighting is traditional biomass (mainly wood fuel).

Primary data from field survey shows that wood fuel is the main source of cooking in the entire project affected area standing at 94.7% (Table 6-31). Further analysis shows that Kerosene (94.8%) was the main source of fuel for lighting for majority of respondents in the project area.

Table 6-31: Source of Fuel

Source of fuel for lighting	**%**
Firewood	1.2
Kerosene	94.8
Electricity	2.8
Solar	0.8
Charcoal	0.4
Source of fuel for cooking	
Firewood	94.7
Charcoal	4.2
Kerosene	1.1

Source: Primary data

- **Transportation**

Road Access to the Site:

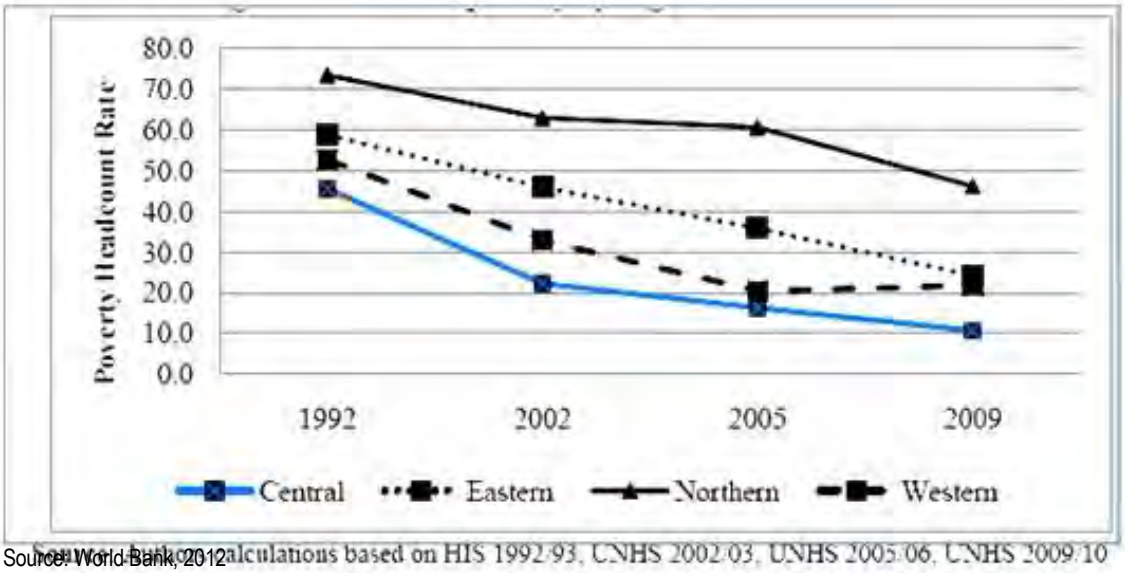
At the right side of the Nile River there are almost no paved roads. Main access road toward the site is Jinja -Kamuli road. Already few kilometers north of Jinja there is no pavement anymore on this road. Most of the access roads toward the site on the right side of Nile River are narrow murrum feeder/access roads, where some of them are only for pedestrians.

On the left side of the Nile River the road Jinja - Kayunga is paved in the full length. This is a two way road with approximate width of 6 meter. Nevertheless, there is still more than 10 km of unpaved feeder/access roads from Kayunga to the site. As on the right side, local access roads toward the site are narrow murrum feeder/access roads.

Due to the existence of the paved road Jinja - Kayunga and the existence of the direct road connection Kampala Kayunga the accessibility to the site is easier on the left side of the Nile River. Nevertheless since there are hardly any local access roads to the site, implementation of the project will require construction of new roads and tracks to provide the access to the dam site, as well as to the temporary facilities such as cofferdams, quarries, batching and crushing plants, stockpiles, workshops and others.

6.2.2.13 Poverty

Uganda has made enormous progress in reducing poverty (**Figure 6-17**), slashing the incidence of poverty from 56 percent of the population in 1992 to 31 percent in 2005 and 24.5% in 2009/2010 (UBOS, 2010). In urban areas the decrease has been even sharper, to 12 percent. But poverty remains firmly entrenched in the country's rural areas, which are home to more than 85% of Ugandans. About 40% of rural people some 10 million men, women and children live in poverty.



Source: World Bank, 2012
Figure 6-17: Poverty levels

According to Roger D *et al*, 2006, Human wellbeing has many dimensions and is perceived differently by different groups. The International Fund for Agricultural Development (IFAD) has identified eight broad classes of poverty and these include; material deprivation; ii) lack of assets; iii) isolation; iv) alienation; v) dependence; vi) lack of decision making power and insecurity. More still, UNDP 2010 defines Poverty not only as lack of incomes but also as the inability to meet basic and social needs, the feeling of powerlessness to break out of the cycle of poverty, and insecurity of persons and property. Majority of Ugandans live on less than a dollar a day.

Poverty is a general problem in the project area. According to the Kayunga District Development Plans 2010-2011 to 2012-2014, poverty is looked at or analysed as lack of ability to afford Education services, health services, inaccessible roads and lack of means of transport, poor marketing mechanisms, lack of adequate safe and clean water, and lack of power and communication systems. The causes of poverty as envisaged by the communities include but are not limited to those outlined as below: -

i) Neglect by government in provision of required services;
ii) Low soil fertility coupled with drought and therefore low productivity of crops and animals;
iii) Lack of access to markets including low producer prices at farm gate level;
iv) Large family sizes leading to high dependency;
v) Corruption and misuse of public funds coupled with lack of accountability;
vi) Inadequate social services for health, education and recreation;
vii) Poor governance hence leadership that is not focused on people needs;
viii) Misallocation of resources to administrative costs rather than address poverty issues;
ix) Poor and old methods of production due to lack attitude to change or lack of capacity to access new technologies and improved seeds;
x) High prevalence of disease leading to poor health and low human productivity;

xi) HIV/AIDS which has left behind many helpless widows, widowers and orphans posing a very big dependence burden;
xii) Political instabilities which distorts production and development.

Furthermore, the situation in both Kayunga and Kamuli district is the same. The poor can be defined as a person who cannot attain the basic needs of life, lack productive resources and basic household assets, income and livelihood opportunities and access to services particularly health care, safe water and sanitation and markets. In Kayunga, the poor are also people who cannot afford two meals a day.

In the project area, poverty was explained differently by different groups of people. However, the commonest definition of poverty given by the women and men of Kayunga district during focus group discussions was that poverty is the inability of an individual or a household to access basic needs and social needs i.e. land, food, shelter, clothing, health and education. Respondents classified the rich as; one having acres of land, permanent structures, having a vehicle, taking all children to school and having good health care treatment while the poor households were characterized by low income persons, large household sizes of around 8 to 10 children with their dependants, grass thatched mud and wattle huts and having children without educating them. The causes of poverty in the area include unreliable rainfall, high levels of illiteracy, poor crop practice, poor marketing systems and, alcohol and drug abuse. Others defined poverty as having no house, land and lacking money to pay school fees for children as well as inability to go for health care.

Through focus group discussions, poor households were characterized by low income persons, large household sizes of around 7-10 children as well as high numbers of dependants. Most of the farmers within the project area complained of poor markets for their produce. This was attributed to lack of access to transport for their produce to the markets. Therefore the majority would sell their produce from home where suppliers would come to them, paying very little money that would not sustain their families. This was observed in Kiteredde, Nampanyi, Nakatooke, Wabirongo and Budooda in Kayunga district and Bupiina, Buluba and Nabukiidi in Kamuli district. In Jinja district, Lumuli village also reported being very poor.

Based on the data obtained during the household survey in the Project area and observation, it can be said that a majority of residents and households can be referred to as poor. Given the indications of poverty in the project affected communities, there is a level of vulnerability that will need to be considered in any social restoration programs to be developed resulting from impacts due to project activities.

6.2.2.14 Expenditures, Savings and Credit

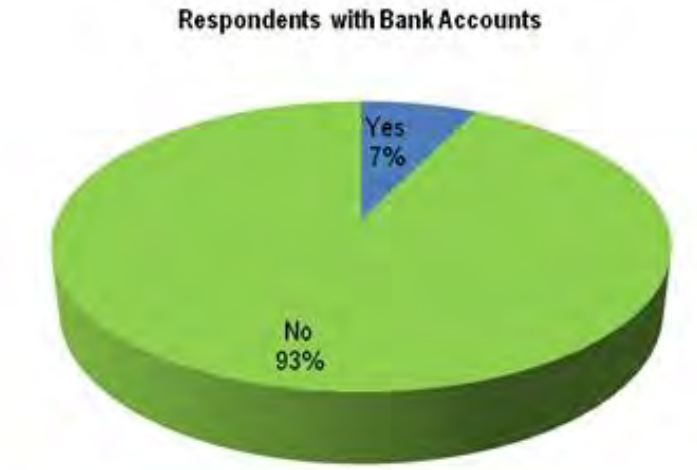
The important categories of expenditure are food/household essentials, education, health care, transport, clothing, communication and rent. From interview with PAPs in the RAP report, majority of respondents (**Table 6-32**) reported spending their incomes mainly on health care followed by food and transport. Expenditure on school fees was less spent on because of the introduction of UPE in the country which has benefited many rural parents.

Table 6-32: Spending Patterns

Spending Patterns	**Rank***
School fees:	4
Healthcare/medical expenses:	1
Food:	2
Clothing:	4
Transport:	3
Dependants:	6
Rent:	6
Airtime:	6

Source: Primary data

People reported not having any savings. They revealed that money got from their produce helped the household in terms of educating children, buying basic needs such as soap, sugar and food as well as seeking medical care. Affordable and reliable opportunities for saving and obtaining credit are limited within the project area. About 93% percent of households have a no bank account (**Figure 6-18**). Some respondents reported using SACCOs although not playing an important role in the area. Borrowing mainly takes place from friends and relatives rather than financial institutions.



Source: Primary data
Figure 6-18: Respondents with Bank Accounts

6.2.2.15 Settlement Patterns and Housing

Housing in the rural areas is constructed mainly in family compounds. Buildings are either _temporary' (built with traditional materials), _semi-permanent' (with traditional walls and corrugated iron roofs) or _permanent' (with brick or concrete walls). The settlements within the project area are linear with some permanent structures and various semipermanent and mud and wattle houses (**Plate 6-9**). Settlement patterns have no defined sequence as one settles next to the fathers homestead, or on inherited land or a distance on purchased/inherited land parcels.

Permanent structures are made of permanent brick, are roofed with iron sheets and are mostly residences and institutions. Institutional structures, mainly schools are built of permanent brick material and roofed with iron sheets. Semi-permanent buildings are mostly residential and support structures such as latrines, kitchens and livestock structures are evidenced as one goes deeper in the villages. The mud and wattle structures are a typical village setting characterized by scattered settlements with footpaths. The compounds are composed of groups of grass thatched houses accommodating members of an extended family.

The most common types of housing in the project areas are mud and wattle with iron sheet roofs followed by mud/wattle with grass thatched houses. Low quality semi-permanent houses having corrugated iron sheets were also available especially as one got closer to the trading centres. Permanent settlements were also identified and majority seen in Kamuli district. A total of 457 structures will be displaced by the project with where 413 were semi-permanent and 44 permanent.

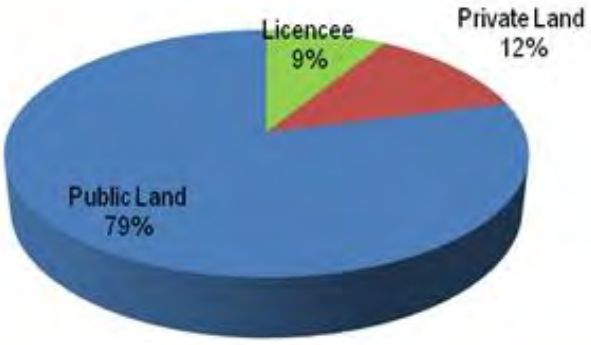
Plate 6-9: Some of the dwellings to be affected by Isimba Hydro Power Project

6.2.2.16 Land ownership

Land ownership in the project Districts vary. In Kayunga, Kamuli and Jinja districts, majority of land is customary (was formerly public or government owned) and Private Mailo land. A majority of residents do not have title deeds for the land. The people only own ―BibanjasII and usually inherit land from parents and grandparents. A very small number of people are private mailo owners with title deeds.

Household interview analysis during the SIA revealed that only public land and private mailo land exists in the project area. Majority of respondents (79%) are Kibanja owners on formerly public land (**Figure 6-19**).

Further analysis revealed that more men than women owned land in the project-affected areas. Traditionally land belongs to men and thus women have little say about its ownership. From field surveys, it was revealed that most women who owned land were either widows who inherited the land from their husbands or their parents.



Source: Primary data

Figure 6-19: Land Tenure System Practiced in the Districts

6.2.2.17 Vulnerable Groups

Vulnerability is the degree to which a population, individual or organization is unable to anticipate, cope with, resist and recover from the impacts of a project (WHO, 2005). Vulnerable groups are defined by the World Bank policy on involuntary resettlement (OP 4.12) as *„people who by virtue of gender, ethnicity, age, physical or mental disability, economic disadvantage, or social status may be more adversely affected by resettlement than others and who may be limited in their ability to claim or take advantage of resettlement assistance and related development benefits*".

The vulnerable groups in the project area are elderly widowed, child headed households and handicapped. People living with HIV/AIDS also qualify to be categorized as a vulnerable group due to the stigma associated with the disease and discrimination, but due to lack of availability of data on them, they have not been included in this study. In the project affected districts a number vulnerable people were identified except for Jinja district. **Table 6-33** below shows the vulnerable groups identified.

Table 6-33: Vulnerable people in project area

Name	Village	Age	Sex	Level of vulnerability	Affected property
KAYUNGA DISTRICT					
1. Silas Sajjabi	Kasege	100	M	Elderly and sick	Land
2. Edisa Nawudo	Budooda	80	F	Elderly and Widow	House
3. Kafuuko Yoweri	Kireku	83	M	Elderly, sick	House
4. Yowani Kimana	Kiteredde	74	M	Elderly, sick	Land
5. Asayo Mariam	Kiteredde	60	F	Widow	Land
6. Nakayima Florence	Kiteredde	68	F	Widow	Land
7. Dambya Sulaiman	Kireku	80	M	Elderly and sickly	Land
8. Opendi Steven	Nakakandwa	63	M	Sick	
9. Juma Francisco	Nakakandwa	75	M	Sick	
10. Omoga John		73	M	Widowed	
11. Sebukyalo Lawrence	Kasege	70	M		
12. Muwanga Bubala	Kasege	70	M		
13. Ngonafa Samuel	Kasega	73	M		
14. Owori Dominic	Nakakandwa	69	M		
15. Otwami Micheal	Damba	70	M		
16. Kamala Pholemon	Kirindi	85	M	Elderly and sickly	
17. Ledra Sitrano	Kiterede	86	M		
18. Wandera Gabriel	Nakatooke	60	M		
19. Majanga Joseph	Nampanyi	65	M		Shrine
20. Ogoola Ann	Nakandwa		F	Widow	
21. Obbo Bonifance		95	M	Widow	Land
22. Okoch Anthony	Nampanyi	78	M		
23. Mutambala Tabu		77	M	Sick	
24. Kimama Yowana		74	M	Old and sick	
25. Kyamuragala Yog		79	M	Sick and Old	
26. Ssegunoni Adbunulu		101	M		
27. Mukasa Elibu		92	M	Very old	
28. Dambya Sulaiman	Kireku	80	F	Very old	
KAMULI DISTRICT					
29. Katema Jaliat	Nababirye Bukasa	75	M	Widowed, sick	Land
30. Bamusunguire Edina	Bulamuka	80	F	Ill, elderly	Land
31. Alikoba Eseza	Nababirye Bukasa	40	F	Widow	Land
32. Namutamba Maidhuma	Nababirye Bukasa	40	F	Widow, HIV	Land
33. Mukodha Lovinsa	Isiimba	80	F	Widow, very old	Land
34. Mirembe Zewuliya	Isiimba	80	F	Widowed	Land
35. Kafuuka Magadaline	Isiimba	80	F	Widowed	Land
36. Namulonda Kalivamuk	Isiimba	80	F	Widowed	Land

Name	Village	Age	Sex	Level of vulnerability	Affected property
37. Bulуuba Richard	Bupiina	90	M	Elderly and sick	Land
38. Muzeeyi Silverster	Bupiina	87	M	Elderly and sick	Land
39. Mayanga Margret	Bupiina	68	M	Widow	Land
40. Lugero John	Bupiina	78	M	Physical disability	Land
41. Buluba Dison Paul	Bupiina	83	M	Physical disability	Land
42. Erinest Aguni	Bupiina	77	M	Elderly	Land
43. Nsiyaleta Erizimansi	Bupiina	80	F	Elderly, sickly	Land
44. Mandwa Sabakitiana	Namalumba	85	M	Elderly, sickly	Land
45. Nkuba Joel		19	M	Child headed	Land
46. Dhumuwe Besweri	Bulangira-Bukose	70	M	Sick	
47. Mukama Muzungu	Bulamuka	80	M		
48. Balaba Issa	Bulamuka	80	M		
49. Wanjala Faziri	Isiimba Nabukiidi	16	F	Child headed	
50. Mudduawulira Robert	Buluba	55	M		
51. Ekuluba Peter	Buluba	55	M		
52. Bileza Wilson		80	M	Elderly and sickly	
53. Waiswa Nkamba	Namalumba	80	M	Elderly and sickly	
54. Muzungu William		80	M	Elderly and sickly	
55. Isanga Musumba		80	M	Elderly and sickly	

6.2.2.18 Cultural Property

According to the United Nations, ―cultural propertyll includes sites having archaeological (prehistoric), paleontological, historical, religious, and unique natural values. Cultural property thus encompasses both remains left by previous human inhabitants (for example, shrines) and unique natural environmental features such as waterfalls.

Cultural resources to be affected were noted to be burial grounds of relocated households and shrines of traditional worship. Field surveys show that a total of 8 traditional religion sacred sites (shrines) will be affected by the proposed Isimba dam where 3 are located at the left bank (Kayunga District) while 5 are at the right bank (Kamuli District) and non in Jinja district. More to this a total of 668 graves will be affected by the proposed Dam. These sites are highly valued by communities for reasons such as problem solving, decision making, treating diseases, protection against epidemics and enemies. Whereas the local communities are agreeable to relocation of the structures, they believe rituals must be performed before relocation. All shrine owners narrated that their spirits are only associated with the river and cannot be relocated further inland away from the river bank. For example in Kirindi Vilage in Kayunga village one Madina Nalongo Nabirye did not mind relocation of her shrine to the new river bank boundary that will be established by the reservoir impoundment. Details of the shrines to be inundated by the proposed dam are described in **Table 6-34** below. Plate 6-10 to Plate 6-13 show some of the shrines located in the project area. A detailed cultural resources baseline report is provided in Annex E.

Table 6-34: Cultural Property to be affected by the proposed Isimba Dam

District	Village/GPS coordinates	Name	Details
Kayunga	Nampanyi (0504483E; 0085203N)	Majanga Joseph	This is the Bura spirit where traditional practices are performed.
	Kirindi (0506254E, 0075513N)	Madina Nalongo Nabirye	The Nakwaya and Kirindi site is located on the river. This site has built shrines and is recognized as a place of traditional religion by the locals. This spirit is owned by

District	Village/GPS coordinates	Name	Details
			members of the Nvuma clam in Bugerere.
	Budooda (0505606E, 0079332N)	Ssekajja & Masaba	The site is located in a living tree which is hollow. It is reported that worship activities take place at night and people are cleansed of their misfortunes by these priests.
	Nababiye (0507805E,0085653N)	Farida Namulondo Nairuba	It is where traditional activities take place. The site has a spirit called Nababirye.
Kamuli	Isimba Nabukiddi (0506213E, 0080769N)	Tofa Kyabanakolanga	The shrine caters mainly to the members of the Clan but had of recent been receiving other people who would be brought by members of the clan for traditional worship
	Nankandulo (0506625E, 0077133N)	Mudali Edrisa	
	Nankndulo-Nabukidi Zone (0506625E,0077133N)	Madina Nakibogo	The Spirit of Nakyaaka are located in the land of Mr.Mudali Edrisa who also serves as the priest of the spirit. The spirits solves problems of people using the powers of Nakyaaka.
	Nankandulo Island (0506358E, 0076236N)	Lt. Mudduawulira	The Mukasa ans Nakayaaka spirit are on Nankandulo Island. This traditional priest conducts people with problems to the island where they pray to the two spirits to solve their problems in life.

Plate 6-10: Priest of Nakyaaka spirit at riverside shrines

Plate 6-11: The priestess of Nababirye spirit in traditional attire at home in Kisozi village.

Plate 6-12: Muddu-awulira shrine on Nankandulo Island at Shrine.

Plate 6-13: The priestess of Nababirye spirit in traditional attire at home in Kisozi village.

6.2.3 Adventure tourism

6.2.3.1 Baseline situation

As an important early administrative and transportation centre but more significantly, later, as Uganda‘s principal industrial centre, Jinja has always attracted business visitors and thus a small number of hotels and guest houses have been established to accommodate this particular sector of the tourism market. Moreover, holiday or recreational tourism in Uganda, which historically has been relatively small compared to neighboring Kenya and Tanzania, was in earlier times focused on game viewing/hunting in the west and north of the country and thus largely by-passed Jinja.
In the mid-1990s overseas white water rafters became aware of the essentially unknown, equally high quality series of grade 4 and 5 rapids on the Victoria Nile and decided to turn their attention to offering rafting at this river. *Adrift* was the first company to operate white water rafting in Uganda, commencing operations in 1996, while *Nile River Explorers (NRE)* was the second rafting company (commencing early in 1997). Since then, the adventure tourism industry has grown steadily, and today, there are over 13 different operators within this segment (see Table 6-35:). Hence, since the beginning of 1996, the Jinja / Upper Victoria Nile area has developed into Uganda‘s and perhaps East Africa's premier adventure tourism center.

The Jinja / Upper Victoria Nile area are also the location of several ―action typell tourism operations other than white water rafting and kayaking. These include:

- All-terrain vehicles (ATVs);
- Horse riding;
- Birdwatching;
- Bungee jumping; and,
- Ecotourism (mainly in the Mabira Forest).

Known companies in the adventure tourism segment are shown in Table 6-35: and Table 6-36 while the major accommodation options along this part of the Nile are shown in

Table 6-37. Most of the latter companies cooperate closely with the adventure tourism operators and rely heavily on tourists who come to this area for white water rafting, kayaking, etc.

Table 6-35: Water sports (rafting, kayaking, tubing, fishing, etc.) operators in this area.

Company	Contact person	Web site
Nile River Explorers	Jon Dahl	http://raftafrica.com/
Kayak the Nile	Jamie Simpson	http://www.kayakthenile.com/
Adrift	Brad McLeay	http://adrift.ug
Nalubale rafting	Frazer Small	http://www.nalubalerafting.com/
Gorilla Jet River Adventures	Geoff McComb	http://raftafrica.com/site/other-river-activities/gorilla-jet/
Wild Nile Jet	Gavin Fahey	http://adrift.ug/gavin-fahey/
Love It Live It	Sam Ward	http://www.loveitliveit.co.uk/
Adventure X		http://www.adventurex.co.uk/uganda.asp
Zen Tubing	Pete Merdith	http://en-gb.facebook.com/pages/Zen-Tubing/181016401917227?v=info
Equator Rafts	Hitesh Vorra	http://www.equatorrafts.com/
White Nile Kayaking	Prossy Mirembe	http://whitenilekayaking.com/Contact.html
Jinja Fishing	Rob Jones	
Garuba Adventures	Pete Meredith	

Table 6-36: Other adventure tourism operators

Company	Contact person	Web site
Explorers mountain biking	Nash Karanja	http://www.raftafrica.com/mountainbiking.htm
Nile Horseback Safaris	T.J. Lonsdale	http://www.nilehorsebacksafaris.com/nhs_about_us.asp
All Terrain Adventures	Peter & Shirray Knight	http://www.atadventures.com/ata/index.html

Table 6-37: Major accommodation options along the river.

Company	Contact person	Web site
The Hairy Lemon Eco-lodge	Paul Ferguson	http://www.hairylemonuganda.com/
The Haven Uganda	Rainer Holst	http://www.thehaven-uganda.com/
Wild waters Lodge	Brad McLeay	http://www.wild-uganda.com/
Holland Park	Wim and Monique	http://www.hollandparkuganda.com/home.htm
Jinja Nile Resort		http://www.madahotels.com/jinjanile/index.php
Kingfisher Resort		http://www.kingfisher-uganda.net/en/jinja-en/
The Nile Porch	Frazer Small	http://www.nileporch.com/
Eden Rock resorts	David S. Kalebi	http://www.edenrocknile.com/
Nile River Camp		
Speke Resort		

Of the operators in Table 6-35: six companies reported a total of 34040 customers in 2010, while the 3 operators had close to 5500 customers in 2011. According to information from companies owners/ operators, the annual turnover for these 9 companies was close to 3.6 million USD in 2010. If similar figures for the remaining 7 operators and 12 resorts/lodges had been included in the estimates, the total annual turnover would be higher. It is to be noted that these figures could not be confirmed through official sources and are based on interviews with owners of these companies.

It is very hard to put these figures in the overall perspective of the Uganda's tourism industry. But knowing that according to the official sources, 15,000 gorilla tracking permits per year with a rate of USD 500 per day and the visitor numbers at Queen Elisabeth NP of 62 513 in 2009 and Murchison Falls NP of 39,237 in 2009, it is clear that white water rafting and kayaking offered by adventure tourism operators along the Victoria Nile is an important tourist attractions in Uganda. Obviously, this influx of tourists play a very important role in the local and regional economy, as well as the national economy since tourism is becoming a major foreign exchange earner for Uganda.

During field visits, surveys and observation, a number of tourist activities were observed and these were likely to be affected by Isimba hydropower project. There are a number of adventure tourism operators in the project area which rely more or less entirely on rapids of the upper Nile (from Bujagali and down to the dam site). In addition, there are other operators depending on tourists attracted by the rafting/kayaking possibilities such as horseback riding, All terrain vehicle (ATV) riding and mountain biking. There are also major accommodation options (resort/lodges) along the river. Field surveys show that the rafting operators that will be affected by proposed Isimba HPP include;

- Kyak the Nile (U) Ltd
- Nile River Explorers
- Adrift Uganda Limited
- Nalubale Rafting

Profiles of these companies are provided below.

a) NALUBALE RAFTING

Nalubale Rafting was started in mid-2005 by Ian Baillie a white water rafting specialist who formerly worked with Adrift Rafting. Both businesses are based in Kampala but the practical rafting operation operates out of rented

premises in Jinja town but has no campsite or related facilities. Kampala is the source of his clientele which is a reflection of his experience with Adrift Rafting who generate most of their rafting business through Kampala based ex-pats, NGOs and other organisations.

At present, Nalubale only operates on weekends and while it offers a range of rafting trips like the other rafting companies, the majorities of trips are one day in length and cost USD 95.The Company employs eight people in Jinja, including three ex-pats and is easily the smallest of the four rafting businesses. It is estimated that they carried around 200 - 300 clients during the six months in which the business operated in 2005.

b) NILE RIVER EXPLORERS LTD

Nile River Explorers (U) Ltd has been operating since 1996 and it has over 80 people who are employed full time by the company. In the last year over (900,000,000) has been spent on the capital goods in the Tourism sector by Nile River Explorers and these include a 50 and a 10 person passenger carrying boat specialist white water rafts and safety passenger carrying transport vehicles and buildings. In the region of 15000 international tourists are attracted by the rafting and come to Uganda annually and use NRE facilities and services.

Adrift Uganda closely works with Hairy Lemon, Nile River Explorers and Nalubaale rafting and are also are in partnership with Brussels Airlines who fly in over 500 kayakers a year to Uganda. The effects on rafting will be huge. Any new dam at the proposed site would effectively close this valuable business to Uganda and leave many Ugandan tax payers working in the Adventure Tourism industry jobless.

c) KAYAK THE NILE U LTD

Kayak the Nile U Ltd has been running kayaking activities over the past 10 years. The company currently takes an average of 600 clients per month and over 50% of their client base use the section of the river between The Hairy Lemon Island and Busaana fishing village in Kayunga District. The company works closely with Nile River Explorers, Nalubale rafting and Adrift Uganda Limited.

d) HAIRY LEMON

The Hairy Lemon Island group consists of nine islands and was first identified in 1998 as a lodge site. Negotiations were opened with the residents and local district leaders and the lease of the nine islands was formalized in 2001. Development of the islands began and has been a continuous process over the subsequent years up to present.

The Hairy Lemon property includes cluster of 9 islands, low lying, with an average height above current water level of around 2 -3 meters. Each island is separated from the next by narrow waterways, fast flowing streams and rapids. The islands are wooded with indigenous vegetation and forest. There is a 15 acre plot on the mainland directly opposite the island group that comprises of low lying areas, grazing and agricultural land which supports the island food supply.

Investment into the project runs into hundreds of thousands of dollars with of landscaping and design of the mainland and islands. Facilities of the company include:

- Camp site development
- Bridge between islands
- Bar / Restaurant / kitchen
- Two separate lounge and relaxation venues
- Ten accommodation units, offering 42 beds from luxury private bandas, to budget dormitory accommodation.
- Three bathroom / shower units

- Store rooms and linen room
- Water storage and underground piping systems
- Spiral water pumps (unique ecologically friendly design).

The resort has a strong clientele base:

- **Kayakers and other water based activity users:** The unique location and proximity of this island group to the world famous surfing waves of Nile Special rapids attracts the international kayak community who frequent the islands for short and long stay holidays. The demographics of these kayakers include, English, American, Slovakian, Russian, Czechoslovakian, German, Scandinavian and many other countries.

- **Kampala patrons:** Due to its location only 2 hours from Kampala and one hour from Jinja, the resort attracts many Kampala residents for weekend recreation and relaxation. These are families, school groups, volunteers, NGO workers and independent international tourists alike.

- **Wild life enthusiasts, Bird watchers and recreational fisherman:** This unique location and rare morphological structure, namely a cluster of islands with inter-leading waterways and rapids, which is covered by indigenous vegetation and trees, has been preserved and protected as a location which offers a diverse ecosystem, a natural wildlife habitat, a wide variety of birds and mammals, and a natural fish breeding sanctuary.

Hairy Lemon Resort also offers employment to 14 Ugandan staff.

7 POTENTIAL PROJECT SOCIAL IMPACTS

Considerable social impacts can ensue from development of dam project (especially during construction phase). This chapter presents an analysis of predicted impacts and recommended mitigation actions related to the varying social impacts as a result of the data presentation and analyses in the previous chapters. It should be noted that a Resettlement Action Plan (RAP) has been prepared separately to mitigate social (and economic) impacts of displacing, relocation and resettlement of affected people or restoration of their livelihoods and replacement of affected assets. Impacts have been presented to provide specific examples and clarity on socio-economic impact on receptors and also ensure that mitigation actions recommended meet needs of affected communities. Additionally, A Social Management System has been prepared (Chapter 8) including suggested community development initiatives that could be considered by the project.

7.1 IMPACTS OF ISIMBA HYDRO POWER DAM CONSTRUCTION

7.1.1 Positive Impacts

7.1.1.1 Employment opportunities

Up to 1000 people will be employed during construction expected to last 4-5 years. These employees will mostly be unskilled and semi-skilled workforce hired from the local communities. This employment will be long-term and represents a positive socio-economic impact that would benefit local economies through increased spending power. This may spur establishment of retail businesses of foodstuff, phone charging kiosks especially targeting construction workers.

Impact enhancement measures: The project proponent can impress a contractual responsibility upon the contractor to hire a given percentage of labour from local communities. Workforce recruitment should be undertaken with involvement of local leaders who can identify their citizens. Monitoring by a representative of the project proponent during recruitment is necessary for transparency and ensuring that job seekers are not made to pay for job opportunities.

7.1.1.2 Economic benefit from sourcing of local construction materials

Construction of Isimba dam will entail considerable capital investment by UEGCL. Supply of construction materials such as aggregates and murram will provide economic opportunity for owners where these sites are located. Other material such as cement, timber and steel would not be procured from local communities but national suppliers would similarly benefit throughout the 4-5 year construction period.

At microeconomic level, the project will stimulate local markets through supply of food stuffs to workers camps. Other benefits to local economies will be rental of houses/ hotels for workers not housed in camps, which will earn the local entrepreneurs considerable revenue. Towns in which this benefit may manifest are Kayunga, Kangulumira, Nazigo and Jinja. This is a positive but reversible upon completion of the construction phase expected to last 4-5 years.

Other benefits to local economies will be rental of houses/ hotels for workers not housed in contractor‘s camps, which will earn the local entrepreneurs considerable revenue over the construction period. This is positive but reversible upon completion of the construction phase expected to last 4-5 years.

This impact can be enhanced by utilizing local labour and procuring local supplies or construction materials wherever practicable; however, the latter will be dependent upon engineering tests being positive for usage.

Impact enhancement measures: Measures below will enhance socio-economic benefit of procurement of local materials during project construction:

- *Providing fair price for earth (sand, gravel, aggregate) materials obtained from local communities.*
- *Restoring stone quarry borrow sites to avoid long-term social (and environmental) impacts such as visual blight, vector breeding areas due to stagnant impounded in pits or risk to people and animals falling in open quarries and pits.*
- *Contractors working with local leaders and communities near material sources, especially stone quarry to warn them a day before and a few hours to blasting to avoid risk of injury from fly rock.*
- *Providing fair compensation for any injury to local people and property damage arising from stone blasting activities.*

7.1.1.3 Additional power to the grid and opportunity for rural electrification

Addition of 180 MW of renewable hydropower to the national grid is a long-term socio-environmental benefit. Rural electrification programmes when undertaken in the project area will benefit from the possibility of Isimba HPP supplying power to surrounding local communities that are potential load centres such as:

- Kiwuba
- Nampanyi village and trading center
- Kitereede
- Bugumira in Burangira Bukoose

7.1.1.4 Improvement of local roads

Roads leading to the proposed sites both at the left and right bank will be improved or new ones built during project development to enable access to the site. Alignments of these roads mainly follow those of existing roads and this will improve transport in communities with secondary benefits such as:

- Enhanced social networks,
- Improved access to healthcare including delivery of mass immunisation services, easy access to villages for HIV/AIDS campaigns,
- Access to markets of agricultural produce and retail consumer goods, ▪

Efficient local administration functions including public security,

- Improved roads could also attract motor vehicle public transport such as commuter buses and taxis which are currently not present in the project area.

This positive impact will be long-term and irreversible.

Impact enhancement measures: Social-economic benefits associated with the developed roads will only be sustained if the local governments regularly maintained them in motorable condition.

7.1.2 Negative Impacts

7.1.2.1 Displacement of People

Construction of the dam, inundation of reservoir will result in the displacement of people. A total of 2076 people the project area will be displaced due to dam construction of which 968 people are in Kayunga district, 1100 in Kamuli district and 8 in Jinja district. The project area has two major islands on which people were living and growing crops; Damba Island in Kayunga District and Koova Island in Kamuli district Although these will be compensated and resettled, there is inevitable loss of structural social ties with people they lived with all their lives.

This impact intensity is assessed as _high' since 457 households will be displaced by the project. Due to loss of social ties and time displaced people would take to restore pre-project living conditions impact significance is predicted to be major.

With these mitigations in place, the intensity will be _low' hence the significance is moderate.

Mitigation:

- All affected people will be compensated with options categorized according to the impacts (refer to the RAP report).
- Those to be relocated will be assisted to move to their preferred locations in any way possible by UEGCL. ▪ Those who are viewed as vulnerable will be provided with additional assistance.
- Affected business may be entitled to income restoration compensation.
- Compensation payments, will be monitored to ensure households remain in a similar socio-economic situation or better than pre-project levels. This will also monitor potential —squanderingll of financial compensations.
- In kind settlement will be limited to those considered extremely vulnerable and unable to replace dwelling even if cash was given.
- Asset-for-asset compensation will be provided to affected persons who choose this option for fear of inability to purchase equivalent assets they previously owned.

7.1.2.2 Loss of livelihood

Within the project area, PAPs will lose their only sources of livelihoods including farming land, transportation and fishing activities they solely depend on. Loss of livelihoods will result from loss of land following its acquisition for construction of Isimba HPP. As already mentioned 80% of the population depends on agriculture while others practise fishing, sand mining and stone quarrying as their source of income. The people dependent on sand mining will also be affected upon inundation of work sites or permanent displacement. Therefore constructing the dam may impede access to working sites and disrupt livelihood for especially fishing folks and sand miners with a risk of increasing household poverty levels for people who depend on these activities. In Kiwuba village in Kayunga district and Bulagira-Bukoose in Kamuli district, some of the PAPs were seen sand mining.

The impact intensity will be _high' because this is a long term impact. In addition the total land area and number of affected people is in hundreds. However all affected people will be compensated for loss of their land, property and crops.

Mitigation:

- During compensation, UEGCL working with local leaders shall sensitize compensation recipients about careful financial discipline to avoid misuse and eventual impoverishment.
- Project schedules shall be discussed prior to construction and during construction, in order for farmers to time their land-use activities to coincide with construction and not to unnecessarily suspend their activities.

The above mitigations will lower the impact intensity to _medium' but the significance of this impact will remain major

7.1.2.3 Effect on social infrastructure

Flooding by the dam reservoir will affect infrastructure such as roads connecting villages, schools, health centers and water points. For example construction of the dam will sever road connectivity between Kiteredde and Nakakandwa villages affecting people's movements unless an alternative road is constructed prior to reservoir flooding.

Construction workers and influx of people seeking opportunities might impress higher pressure on already fragile infrastructure and healthcare services. Infrastructure that might be impacted include local roads, healthcare facilities and water sources.

Mitigation:

- To mitigate the negative impacts due to population influx, the developer will ensure the under the CDAP all relevant stakeholders including local government staff will be consulted so that the CDAP be able to address issues of strain to existing social facilities to ensure their adequacy to the population.

- In the same way, the contractor will ensure adequacy of social facilities for the labour force.

- The contractor should be able plan the provision of alternative roads to communities that will be cut off by reservoir inundation. These areas should be visible from project design maps and include, among others Kiteredde and Nakakandwa villages.
- UEGCL shall, as a contractual obligation require the contractor to use local labor (wherever feasible) to avoid impacts that would arise from increase in local population due to non-indigenous workers. This would also improve income opportunities and economic development of the local populations.
- The contractor shall be required to minimize pressure on local resources. The contractor should endeavour to find own water for construction activities when community sources are insufficient.
- To reduce pressure on healthcare facilities, the contractor shall have their own medical clinic and should negotiate a sub-contract with hospital facilities, in order to deal with serious accidents or injuries that may occur at the construction sites.
- UEGCL / MEMD shall ensure affected public property such as the case of hand dug wells supplied by the diocese are compensated when developing the Community Development Action Plan to be done consultation with all relevant stakeholders.

7.1.2.4 Misuse of cash compensation

According to most cultures in Uganda, women have no ownership over land or most other family property implying that men will be the recipients of cash compensation before project implementation. Cash compensation could create vulnerability to women and children if misused by male household heads instead of restoring pre-project livelihoods and replacing assets (land or dwellings) lost to the project. These negative effects can be long -term and irreversible.

Mitigation:

- During compensation and resettlement, PAPs shall be advised by UEGCL about wise use of money to avoid misuse bringing destitution to their families.
- Monitoring of how compensation payment is spent will need to be a part of the RAP internal and external monitoring.

7.1.2.5 Population Influx into village where construction camp are located

Owing to the high unemployment levels within the project Districts, any significant development that could result in employment will tend to attract large numbers of job seekers. This influx is expected to start during construction phase. It is difficult to estimate the number of job-seekers who will be attracted by the project but once people hear about construction of a large infrastructure project , influx to the site in expectation for employment is certain.

Additionally, the project will attract entrepreneurs seeking to start small-scale businesses and provide services to construction workers, especially lunches and other retail consumer goods at worksites. Population influx could have both beneficial and adverse aspects depending on how the population is managed. Population influx to the project area will spur increase in local economic activity over the construction period but would also increase demand for services including health, food, shelter, water, transport and recreational facilities. Potential negative impacts include health and

pollution hazards of squatter communities, prostitution hence spread of HIV/AIDS and sexually transmitted diseases (STDs) and crime.

Population influx may also lead to culture shock for employees. This is common for immigrants who move to work in an area they don‘t initially live and are culturally unfamiliar with. Migrant workers will encounter non-native cultures and practices in local project communities. Expatriates‘ foreign culture might also conflict with that of local people.

Mitigation:

- To minimize population influx in the area, the contractor should give preference to employing local labour.
- HIV/AIDS awareness programs shall be conducted in the project areas by the contractor, working with local councils and district administration.

If the mentioned mitigations are put in place, the impact intensity will reduce to ‗low' hence the significance will be moderate.

7.1.2.6 Occupational health and safety hazards and risks

Construction of proposed Isimba HPP and reservoir will involve moving heavy equipment and materials through settlements, trading centres centers and construction along alignments adjacent to residential areas. This potentially poses accident risk to the general public and construction workers. Fatal accidents could arise from inept operation of heavy construction machinery, unsatisfactory safety guidelines around the construction site or falling from line's lattice towers when workers neglect requisite equipment (e.g. safety latches). Minor injuries would be reversible but effects such as permanent disability or fatalities are irreversible. Considering that dam construction workers would most likely be household heads, this impact would not only affect workers but their immediate and extended families. This impact intensity is assessed as high because duration (4-5 years) of construction phase is relatively long. The sensitivity, especially to fatalities is high but probably low for minor injuries. Therefore the severity would be moderate.

Mitigation:

- The contractor will have a fully functional clinic at the project site and this can be used by local people who suffer from injuries associated with project workers.
- Contractors shall provide all workers with requisite Personal Protective Equipment (PPE) appropriate to the job at hand. Foremen of the specific crew and management will be responsible for not permitting a worker on-site unless they are wearing the appropriate PPE for the activity. If a worker refuses to use the provided PPE, they are be suspended from their worksite.
- Contractor shall ensure adequate fire safety at workers camp.
- Contractor shall provide on-site toilet and washing water for workers.
- Contractor shall provide —No smokingll signs in office, communal places construction camps as well as high risk areas prone to fire hazards e.g. near fuel tanks.
- Contractor shall provide appropriate safety signage at appropriate locations in the project area including ancillary work sites.
- Contractors will be required to prepare an Emergency Management Plan to cover potential situations on the construction site and within camps to be approved by UEGCL and Ugandan emergency management authorities.
- Hearing protection of Single Number Rating (SNR) of 37 dBA will adequately protect workers from machine noise as high as 118 dBC. BS EN 458:2004 recommends selecting a hearing protector that reduces noise exposure to at least below 85 dBA (ideally between 80 and 75 dBA) at the ear.

The contractors shall ensure the following:

- safe constructional plant, equipment and work methods
- safe handling, storage, transport and disposal of materials in a way that avoids risk to workers ▪ provision of protective gear
- hiring a full time —Accident Prevention Officerll or safety officer ▪ conducting safety awareness among all workers
- control harmful insects/ vectors (including mosquitoes and houseflies)

- reporting accidents to supervising engineer and police

The contractors shall control occupational hazards related to:

- physical hazards (noise, vibrations, high temperature) ▪ chemical hazards
- mechanical hazards (moving equipment)
- electrical/ explosion hazards
- ergonomic hazards (poor working postures, heavy loads, etc)
- poor sanitation in workplace or living environment of workers
- The contractors shall develop OHS, HIV/AIDS and gender management plans.

7.1.2.7 Road traffic risks

Vehicles hauling dam construction materials and workers might cause traffic hazards in trading centres, near schools, health centres and churches. Children, women and elderly people are often at higher risk of traffic related accidents. The risk may be high considering the transportation trucks will pass through a number of villages and trading centers like Nampanyi in Kayunga district and Bulangira- Bukoose in Kamuli district.

Mitigation:

- The contractor will control haulage speed especially in trading centers or near schools by placing requisite warning signs.
- Drivers will be inducted at the start of the Project about road safety and due diligence to ensure safety of other road users.
- As a contractual obligation, the contract will prepare a traffic management plan that details the following:

  a) Traffic control procedures in populated areas
  b) Community awareness
  c) Traffic management personnel
  d) Communication and warning system
  e) Emergency procedures
  f) Travel speed limits and control measures

7.1.2.8 In-migration into villages where construction camps are located

The indirect effects of inward migration will include greater pressure on natural resources such as fuel wood, building materials, groundwater, fish, and grazing and cultivated land. The occurrence of employment opportunities may attract an external workforce to the project areas in Kayunga district on the left bank and Kamuli and Jinja district at the right bank. The presence of an external workforce and competition for local jobs can result in tensions as well as health risks associated with, amongst others, STDs. An increase in population also means increased pressure on the social infrastructure and healthcare services. The cause of tensions may include unfulfilled expectations regarding employment; increasing price of food and land; increasing pressure on land and infrastructure and change in demographic profiles.

Mitigation:

- Implement health, STD and HIV/AIDS awareness/training for the workforce.
- Contractor should ensure that the workplace has adequate access to medical facilities.

- Sensitization of the local communications should be carried out to manage community expectations of the project.
- The contractor should ensure preferential treatment is given to the local communities at the time of employment in order to combat conflicts/tensions in the project area.

7.1.2.9 Impact on religious and cultural resources

The project will impact on the cultural heritage of the area at the household and at community level. At the household level, the cultural properties to be impacted are the graves of households in the area to be inundated. These will have to be relocated along with the homesteads .This will be handled by the Resettlement Action Plan (RAP) where compensation rates will be determined as per laws of the Republic of Uganda.

At the community level, the sacred sites where traditional worship activities take place will have to be relocated. Relocation ceremonies have to be conducted at the eight locations mentioned in (Section 6.2.2.18) to relocate cultural resources (e.g. shrines) from the places affected by the project.

Displaced households will also relocate cultural property such as graves. In the project area, 8 traditional sites will need relocation when constructing Isimba HPP. Of these three were found in Kayunga district and five in Kamuli district. A total of 668 graves will be affected in all the project affected areas of Kayunga and Kamuli but none in Jinja District where PAPs did not have any cultural resource to be affected.

PAPs revealed that they will need logistical assistance to facilitate traditional functions according to their established customs before relocating graves and shrines.

Mitigation: The project will provide equitable compensation to all affected owners, to relocate their cultural assets.

7.1.2.10 Loss of Land

A number of settlements which will not be displaced will permanently or temporarily lose agricultural land. A total of 2867.6 acres will be required for dam, sub-station and reservoir construction work. In Kayunga district, 1631.4 acres will be acquired, while in Kamuli and Jinja districts 1221.8 acres and 14.4 acres respectively will be taken.

Some of affected land is planted with coffee, pineapples, bananas, maize, and beans on which livelihoods of local people depend. Owing to the subsistence nature of livelihoods, sensitivity of affected people to losing land will be high unless land parcels of similar size and agricultural productivity are replaced.

Mitigation:

- The project will provide due compensation to affected landowners to enable replacement of lost land.
- The project will guide displaced persons to identify resettlement areas of similar agricultural productivity based on national soil productivity maps.

7.1.2.11 Impact on agriculture

The communities in areas likely to be affected have been practising subsistence farming as a source of livelihood. Implementation of the dam project will lead to loss of agricultural land. Eventhough people affected will be compensated and relocated, agricultural activities, food production and food security will be affected in the shortterm. During construction of the dam, inundation will impact agricultural field operations and will destroy crops. In areas that are flat for example in Kiteredde and Nakandwa villages in Kayunga District inundation will inundate vast farmlands hence affecting farming and food production.

Notwithstanding the compensation to be provided, impact on subsistence crops would be negative and long-term.

Mitigation:

- UEGCL should assist farmers to get the new agricultural land as quickly as possible to reduce the loss of production.
- Assistance in form of farmers education on tilling and fertilizing methods should be undertaken.
- Plantation owners would be compensated as per recommendations in the project's Resettlement Action Plan (RAP). Location, area affected and ownership of all affected plantations are detailed in a separate property valuation report prepared as part of the Project's RAP.
- UEGCL and the contractor will continually communicate to local communities, LC's and PAPs about project activities schedules during line construction.

7.1.2.12 Impact of noise, vibrations and impaired air quality on communities

Noise and vibration from various construction activities at Isimba HPP site, blasting of rock, material excavation, drilling and grading works may damage property of residents in nearby villages such as Nampanyi, Nakakandwa and Kasana in Kayunga district as well as Bukasa and Bugumira villages in Kamuli district. Dwellings located within 2 km from the proposed site and stone quarries are expected to be the immediate impact receptors. Vibrations from stone quarrying and blasting can crack weak buildings in project villages. Earthmoving operations and protect traffic on gravel roads during dry season may generate dust. Dust would affect roadside markets and shops, tainting goods (maize flour, sugar, rice grains) and agricultural produce on sale.

Exhaust emissions from construction vehicles and diesel powered electricity generators will be relatively low and not expected to breach national air quality standards.

Due to prevailing poverty levels receptor sensitivity is considered high if people's dwellings were cracked by project activities. Tainting goods and produce in roadside markets over 4-5 years construction period would be a considerable financially loss to local people whose livelihoods depend on meagre resources. Prolonged exposure to road dust could lead to respiratory ailments and financial cost for poor ctizens. Again considering poverty levels in the project area, this would be financially burdensome.

Mitigation:

- A grievance procedure should be in place for communities in the project area to report effects and damage resulting from construction works.
- Monitoring of noise in the project area should be undertaken to make sure it does not exceed the regulatory limits.
- The contractor should promptly compensate any damages arising from construction activities.

7.1.2.13 Public health impacts

Construction of the dam will entail large-scale earthworks e.g. excavation besides transportation, blasting and crushing of hard rock. These will generate dust, especially in dry seasons leading to respiratory ailments. Development of respiratory disease due to inhalation of respirable dust has been shown to be in direct proportion to the total load of dust inhaled over a time period.

Mitigation:

- An awareness program on health hazards should be implemented to safeguard the health of employees and community.
- UEGCL should provide full health care for its employees

7.1.2.14 Food insecurity

As already mentioned majority of the population affected by the proposed dam depend on agriculture and cultivate crops such as maize, rice, cassava, sweet potatoes and vegetables as a source of food. Upon displacement from their farming land, PAPs will have to open up virgin land in areas where they resettle but since it takes crops time to mature and be harvested, households might suffer from food poverty.

Mitigation

UEGCL should assist farmers to get the new agricultural land and or inputs as quickly as possible to minimize the risk of food poverty. Additionally, assistance in form of farmers' education on tilling, planting practices and fertilizer use should be provided by UEGCL.

7.1.2.15 Impact on tourism

Construction of the dam would effectively close the river for Kayakers and affect adventure tourism leading to job loss and revenue. Other activities related to tourism that will be affected are bird watching, recreational fishing, local transportation (*boda-boda* or commuter motorcycles riders, restaurants and craft shops). Isimba HPP will also indirectly affect airlines, hotels and safari companies.

Some facilities to be affected are shown below.

Plate 14: Adrift Uganda's structure (a) and another owned by Nile River Explorers Ltd (b) to be inundated by the reservoir

The Jinja / Upper Victoria Nile area are also the location of several —action typell tourism operations other than white water rafting and kayaking. These include:

- All-terrain vehicles (ATVs);
- Horse riding;
- Birdwatching;
- Bungee jumping; and,
- Ecotourism (mainly in the Mabira Forest).

Major accommodation facilities in the Jinja are shown in Table 39.

Table 54: Water sports (rafting, kayaking, tubing, fishing, etc.) operators in the project area

Company	Contact person	Web site
Nile River Explorers	Jon Dahl	http://raftafrica.com/
Kayak the Nile	Jamie Simpson	http://www.kayakthenile.com/
Adrift	Brad McLeay	http://adrift.ug
Nalubale rafting	Frazer Small	http://www.nalubalerafting.com/
Gorilla Jet River Adventures	Geoff McComb	http://raftafrica.com/site/other-river-activities/gorilla-jet/
Wild Nile Jet	Gavin Fahey	http://adrift.ug/gavin-fahey/
Love It Live It	Sam Ward	http://www.loveitliveit.co.uk/
Adventure X		http://www.adventurex.co.uk/uganda.asp
Zen Tubing	Pete Merdith	http://en-gb.facebook.com/pages/Zen-Tubing/181016401917227?v=info
Equator Rafts	Hitesh Vorra	http://www.equatorrafts.com/
White Nile Kayaking	Prossy Mirembe	http://whitenilekayaking.com/Contact.html
Jinja Fishing	Rob Jones	
Garuba Adventures	Pete Meredith	
Explorers mountain biking	Nash Karanja	http://www.raftafrica.com/mountainbiking.htm
Nile Horseback Safaris	T.J. Lonsdale	http://www.nilehorsebacksafaris.com/nhs_about_us.asp
All Terrain Adventures	Peter & Shirray Knight	http://www.atadventures.com/ata/index.html

Table 39: Major accommodation options along the river

Company	Contact person	Web site
The Hairy Lemon Ecolodge	Paul Ferguson	http://www.hairylemonuganda.com/
The Haven Uganda	Rainer Holst	http://www.thehaven-uganda.com/
Wild waters Lodge	Brad McLeay	http://www.wild-uganda.com/
Holland Park	Wim and Monique	http://www.hollandparkuganda.com/home.htm
Jinja Nile Resort		http://www.madahotels.com/jinjanile/index.php
Kingfisher Resort		http://www.kingfisher-uganda.net/en/jinja-en/
The Nile Porch	Frazer Small	http://www.nileporch.com/
Eden Rock resorts	David S. Kalebi	http://www.edenrocknile.com/
Nile River Camp		
Speke Resort		

According to the information received from adventure tourism companies themselves, the annual turnover for 9 companies interviewed was close to USD 3.6 million in 2010. If similar figures for the remaining 7 operators and 12 resorts/lodges had been included in the estimates, the total annual turnover would be higher. These revenue figures could not be confirmed through official sources and are based on direct interviews with the company owners.

Earlier impact on the adventure tourism industry was occasioned by development of Bujagali HPP which was commissioned in 2012. Adventure tourism operators had then adapted to impact of Bujagali HPP where about 10 km of River Nile with three major rapids and four smaller ones were lost (see Figure 20). Rafting and kayaking are now undertaken between Bujagali HPP and Weleba rapids and there are new facilities (camps, etc.) under construction along this stretch of River Nile.

The additional impacts of proposed Isimba HPP will be potentially adverse for the adventure tourism industry in this area, with knock on effects on other sectors such as trade, hospitality and employment.

Figure 20: Important rapids for rafting and kayaking between Kalagala Falls and Weleba

Table 56: Rapids affected by Isimba and Bujagali hydropower projects

Rapid	Class	Lost / threatened by	Approximate distance from Lake Victoria (km)
4 small rapids above Bujagali	2-3	Bujagali HPP	2.5-8.5
Bujagali	4	Bujagali HPP	8.5
Easy Rider	3	Bujagali HPP	8.8
Total Gunga/ G.Spot	5	Bujagali HPP	9.4
Big Brother/Silverback	5	None	10.8
Point Break	3	None	12.5
Overtime	5	None	18.5
Retrospect	4	None	19.0
Bubugo/Super Hole	3	None	23.0
Itanda/Bad Place	5-6	None	25.5
Hypoxia	5	None	27.0
Novocaine / Vengeance / Boulder rapid (three channels)	3-5	None	27.5
Slippery when wet / Hair of the Dog / Easy now (three channels)	3-4	Isimba HPP, Alternative 1	28.5
The Virgins / Kulu Shaker (two channels)	4	Isimba HPP, Alt. 1	30.0
Lemon Approach / Nile Special	3-4	Isimba HPP, Alt. 1, 2	33.5
Malalu (three channels)	4	Isimba HPP, Alt. 1, 2 and 3	41.0
Weleba rapids	3	Isimba HPP, Alt. 1, 2 and 3	46.5

Reservoir *Alternative 1* was selected by the design consultant as the best suited location for Isimba HPP and also based on engineering design, it had a reservoir of 17.5 km length and therefore would lead to loss of 5 rapids of Grade 3 and 4.

Considering that the total river reach available for rafting and kayaking between Bujagali and Isimba is about 34.5 km long and contains about 13 major rapids it can be concluded that the proposed reservoir extent will leave for rafting and kayaking a 17 km river stretch with 8 major rapids.

According to adventure tourism operators in this area, impacts of reservoir will be significant and perhaps some of them will be forced to wind up their business due to the rivers' loss of attractiveness as a white-water destination. Equitable compensation for loss of business for these tour operators and general tourism and especially hospitality industry affected would be almost impossible to satisfy. Due compensation to tour operators may have to be negotiated separately with government based on veritable annual revenue of each affected entity but is estimated at UgShs 25,000,000,000 (or nearly USD 10 million).

7.2 IMPACTS OF CAMP AND EQUIPMENT YARD

7.2.1 Positive Impacts

7.2.1.1 Employment

During construction of the dam, substation and reservoir, the main contractor will require workers' camp(s) however actual locations re not known at this time. Camp and equipment yard operation will provide employment to various categories of contractors ranging from security guards, catering staff and medical personnel. This is evident from similar hydropower projects sites in the country. This is a positive but reversible impact lasting only the construction duration. However, considering the relatively long construction period (4-5 years) and large number of people to be employed (up to 1000) impact significance would likely be *major*.

Enhancement strategies: Where opportunity arises for semi- or unskilled job opportunities, preference should be given to local residents. This should be organised through local leaders. Women should also be considered for available job opportunities. Working with relevant district officials (Probation Officer & Welfare Focal Point Officers), the project should implement a strong HIV/AIDS policy in at camp sites.

7.2.1.2 Local economic benefit from supplies to the camp

The camps will require diesel fuel, food, drinking water and other consumer goods. It would be a significant social benefit if the camp procured some of the required food supplies (fish, tomatoes, onions, cassava, sweet potatoes, Irish potatoes and bananas) from local farmers or farmer organisations. Income earned over the 4-5 year construction period would make a noticeable positive socio-economic change among local farmers. Other supplies procured from national suppliers would have the same economic benefit.

7.2.1.3 Skills transfer

Local people hired by the project would remain in communities with skills acquired during project construction including construction, woodwork, concrete work, steel/metal work and masonry. Former construction workers can use these lifelong skills for self-employment and income generation in local communities or nearby trading centres. This is a positive and long-term socio-economic benefit.

7.2.2 Negative Impacts

7.2.2.1 Excessive lighting

The camp would need light to ensure safety and security. Depending on camp location, offsite light might constitute light pollution in area where night-time lighting is not a baseline aspect.

Duration of the impact will be throughout the construction period (4-5) years which can be considered medium-term. The impact manageability is high considering that it is possible to minimise or prevent offsite light pollution by using low glare fittings and directing light downward rather than horizontally or skyward.

The likelihood of the impact occurring is _high' but overall impact significance is predicted to be moderate when effective mitigation measures are implemented.

Mitigation:

The camp and construction yard will minimise or prevent offsite light pollution by using low glare fittings and directing light downward.

7.2.2.2 Localised waste oil and fuel spills

Considerable quantities of fuel would be stored on camps throughout project construction. Oil spills could occur during transportation, refuelling or transfer of fuel into on-site storage facilities. Considerable quantities of waste oil and oily waste could be accumulated from servicing power generators, construction equipment and vehicles. Other oily waste would constitute spent lubricants/greases, oil filters, used rags and spent clean-up solvents.

Fuel or waste oil spill would pose adverse onsite or offsite ecological impacts. Improper waste oil management would have short- to medium-term contamination impact on soil, River Nile or land to which stormwater from camp or equipment yard may transport oil contamination.

The impact is negative, short- to medium-term and reversible (when site is cleaned up). Duration of contamination by oil or fuel spills can be short term if quantities spilt are small but medium-term if chronic spills occur throughout the 4-5 year construction period. Extent of the impact would be local, limited to camp site. Impact manageability would

depend on nature and integrity of bunding around fuel storage areas, adequacy of the contractor's oil spill management plan, equipment and vigilance. The likelihood of the impact occurring is medium if a proper fuel storage, handling and spill control or containment measures are followed.

Mitigation:

- Onsite fuel storage will secure a license from Petroleum Supplies Department of MEMD.
- Contractor should follow stringent fuel storage and refuelling procedures such as not refuelling or transferring fuel after dark or under deficient light conditions.
- Fuel transfer operations will use drip pans (wherever necessary) to collect dripping fuel.
- Contractor shall have a spill prevention and countermeasure plan (SPCP) on site together with adequate supplies of oil spill control kits and a trained staff in spill prevention and control.
- The project shall contract a NEMA-licensed waste contractor to collect and treat oily waste. Alternatively, if agreeable, waste oil should be returned to suppliers for either reprocessing or reuse.
- To avoid road tanker accidents, all fuel/waste oil transportation contractors should observe 40 kph speed limit on local roads characterised by harsh terrain.

7.2.2.3 Noise and air emissions from electricity generator

The camp diesel-powered generator sets will emit noise. Moreover, since the generators will run 24-hours, noise would be emitted day and night. In addition to noise diesel generators would emit CO_2, NO_x, SO_x, VOC and particulates. However it is predicted that national, regional or global cumulative effects of these emissions would be insignificantly low.

Continuous exposure of humans to high noise in workplace environment is known to cause noise-induced hearing loss (NIHL) and other discomforts like headaches and stress. The national regulatory requirement is that workers exposed to more than 85 dBA for atleast 8 hours should wear hearing protection.

Impaired air quality increases risk of respiration ailments. Noise and impaired air quality would be local, negative impacts but short-term and reversible when camp gets decommissioned at end of the 4-5 year construction period. Duration of the impact can be short- to medium-term. Extent of the impact is local mostly limited to camp surroundings. Impact manageability is medium (if generators are fitted with acoustic silencers to reduce offsite noise).

Mitigation:

- Fully silence onsite diesel generators to reduce noise.
- Provide personnel protective equipment (PPE) e.g. ear plugs/muffs, respiratory aids to workers.
- Regularly service generators to maintain high combustion efficiencies and minimize emissions. Undertake preventive maintenance of vehicles and machinery to reduce noise they generate.

7.2.2.4 Fire risk at camps

Fire causes could be such as smoking in or near fuel storage areas, or throwing smouldering cigarette butts onto dry combustible materials or dry grass surrounding the camp.

A large fire outbreak would impair the construction program but also result in loss of equipment, materials or even human life. In dry seasons when grass around camps is dry, a small fire could quickly spread onto a large area affecting large area and stalling construction activities on sites.

- Duration of the impact can be short-to medium-term. ▪

Extent of impact is local.

- Impact manageability would depend on fire contingency measures of the contractor but proximity to River Nile should make firefighting operations easy.

Severity is therefore assessed as high. The likelihood of the impact occurring is medium, thus, overall impact significance is assessed to be major

Mitigation:

- The camp site should have adequate fire fighting capability to fend off a large fire. Fire extinguishers should be located in easily accessible places.
- The contractor shall sensitize workers on sources, possible causes and prevention of fire at the camp. Workers should be knowledgeable about use of fire fighting equipment and aware of various colour coding on fire extinguishers.
- The camps must have part of the site designated as a fire evacuation/assembly area.
- Smoking should only be allowed in designated low-risk areas. No smoking must be allowed near fuel storage areas.
- The camp should maintain a 10-metre strip of bare ground to act a fire barrier around the camps.

7.2.2.5 Improper camp and yard waste management

The camps will generate both liquid and solid waste. Each category has the following potential effects:

- Visual blight on site
- Vermin infestation
- Wildlife e.g. primates chocking on (especially food remains) ▪

Odorous emission at waste dump

- Short-terms, medium-term or even long-term contamination of sites and River Nile

Improper waste management would lead to occupational health and safety effects, site contamination impacts and scenic blight. Impacts to wildlife and contamination of River Nile are also possible impacts. All of these are negative, short- to medium-term but reversible impacts.

- Duration of the impact would be short- to medium-term ▪

Extent of the impact is local.

- Impact manageability is high since when due diligence and proper waste management practices are implemented.

Severity is therefore assessed as medium. The likelihood of the impact occurring is medium thus significance is assessed to be moderate.

Mitigation:

- Minimise waste to the extent possible.
- Undertake waste segregation at source.
- Contract a NEMA-licensed waste contractor to pick and haul away waste for resale, reuse or disposal.
- Ensure onsite waste disposal dumps are managed judiciously, fenced and would not pose risk to wildlife. For example, food in waste pit should be covered daily with a layer of soil.

7.2.2.6 Prostitution, HIV/AIDS

Due to income disparity, construction workers who will have readily expendable income will be revered by the poor local people. This may stimulate irresponsible sexual fraternisation and prostitution with attendant risk of HIV/AIDS. Health consequences of HIV/AIDS are permanent and irreversible.

Mitigation:

- The camp should have a strict policy against sexual fraternisation among workers and local people to avoid prostitution within and around it.
- Non-project workers except official visitors must not be allowed in the camp.
- Residents should not leave camp after 6 PM. This is also for their personal safety.

7.2.2.7 Improper camp decommissioning

Negative socio-economic impacts would occur if the contractor did not properly restore camp sites to original condition at the end of construction operations. Derelict equipment, patches of contaminated soil and abandoned waste would not only cause environmental contamination but also social and public health impacts.

It is expected that camps closure might result in loss of jobs for some workers. There might also be challenges of remediation of patches of campsite contaminated by fuel/oil, disposal of construction waste or other waste streams and landscaping the camp site to original conditions. All of the above are negative, short- to medium-term but reversible impacts.

- Duration of the impact can be short- to medium-term if decommissioning, including remediation of soil contaminated with hydrocarbons, is not properly managed.
- Extent of the impact is local limited to camp sites
- Impact manageability is high since camp site decommissioning and remediation are manageable activities.

Severity is therefore assessed as high. The likelihood of the impact occurring is medium thus significance is predicted to be major.

Mitigation:

Before closure of camps, the contractor should plan for the following elements:

- Requirements and procedure for removing equipment, waste and structures from the camp site,
- Requirements and procedures to restore the site to original condition, leaving no visual alterations that would impact the landscape,
- Description of how possible socio-environmental impacts will be minimised during decommissioning.

Decommissioning should remediate any onsite contamination and restore site to the maximum extent consistent with pre-project land use. During decommissioning and site restoration, the following issues should be addressed following a site restoration plan:

- Hard pans (ground surfaces) such as at vehicle or equipment parking yards should be adequately scarified (surface broken up) to enable immediate vegetation re-growth.
- Avoid introduction of non-native plant species in the quest for rapid vegetation restoration. A properly scarified site would have native vegetation regrowth within 3 months without need for planting alien species. Any replanting effort should utilize native plant species from the campsite neighbourhood.
- Avoid leaving abandoned equipment on campsites.
- Remove or properly treat any existing solid waste and effluents.

i) Patches of ground contaminated with fuel/waste oil (e.g. at vehicle parking area, machine workshop areas, etc) should be remediated.

7.3 IMPACTS OF BORROW AND STONE QUARRYING

It is a NEMA requirement for the contractor to undertake environmental assessment for sites they will select to obtain materials from. Sections below therefore discuss broad impacts associated with use of material source sites, with the understanding that detailed social (and environmental) assessment will be undertaken by the contractor prior to opening up borrow and quarry sites.

7.3.1 Sand and gravel borrow sites impacts

7.3.1.1 Occupational safety risks

Occupational safety risks may result from failure of borrow pits or sand mine faces or slopes triggering a slide that could burry workers under tonnes of sand or gravel. The gravity of this danger depends on depths of quarry pits and angle of quarrying relative to ground surface. In wet seasons, gravel and sand quarry pits are typically characterised by high moisture content material and are most likely to fail when excavation is done almost vertically (Figure A) rather than nearly horizontally (see schematic B).

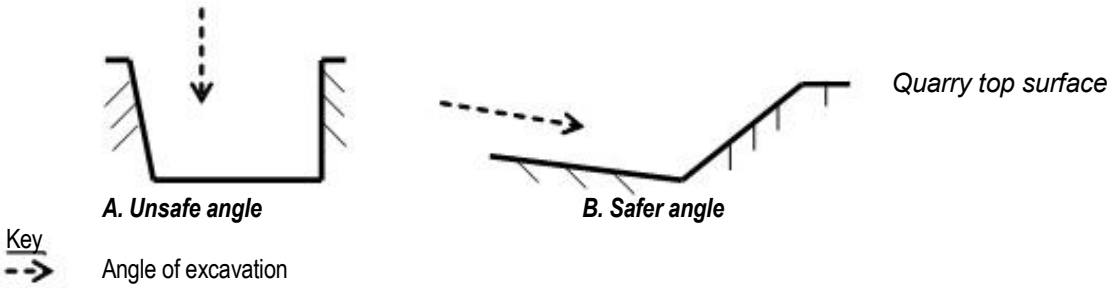


Figure 7.21: Illustration of unsafe and safe excavation angles

Mitigation:

Sand and gravel excavation should ensure embankment slopes have safe angles to avoid slope failure.

7.3.1.2 Malaria

Sand mining would leave pits that can hold stagnant water during wet seasons. These pits would also hold water whenever their depth is such that the water table gets reached. Ponds holding stagnant water would be breeding grounds for mosquitoes, presenting a risk of malaria to community.

Mitigation:

Sand and gravel excavation sites should have proper drainage to avoid stagnant water.

7.3.1.3 Quarry closure impacts

A borrow site or sand mine that is not adequately restored to ―as-near-originalll conditions as possible would be unsightly and a potential source of malaria, accident and people, livestock or wildlife drowning in water-filled pits. Proper reclamation is required to restore borrow sites and sand quarries to original profiles and drainage patterns.

Mitigation:

Restoration is more cheaply carried out progressively with ongoing quarrying rather than waiting till the end of borrow site active life. With progressive restoration, depleted sites are restored as virgin ones are opened up. It is then possible to fill gaping pits with overburden stripped from newly opened work areas.

During site restoration it is common and acceptable to refill depleted pits with spoil or murram ferried from where it was unwanted.

7.3.2 Stone quarry impacts

7.3.2.1 Risk of Fly Rock

Stone quarrying will involve use of blasting explosives and risk of fly rock injuring people, livestock or property in surrounding communities. While damage to property can be compensated, effects of injuries involving permanent disability or death are irreversible social-economic impacts.

Mitigation:

- Effort should be taken by the company to provide adequate advance warning to local community, road users and local leaders before blasting. Local communities within 200 meters of the quarry site should be warned a day before blasting and an hour to blasting to avoid risk of injury by flyrock. For incident -free operations, the company should undertake conclusive negotiations and agreements to relocate farther away any existing resident who it considers at looming danger of flying rock fragments from the stone quarry.

- Whenever opportunity provides, the contractor should utilise a blasting technique that concentrates flying rock fragments to the center of an imaginary sphere comprising the quarry surface. This technique involves lacing and detonating explosives at two slating faces of an active quarry face (see figure below). On detonation, most rock fragments will fly toward each other, collide within an imaginary sphere in the quarry and drop down on the quarry floor. This, unlike where blasting is done on one face of the quarry, minimises offsite damage by fly rock from the quarry.

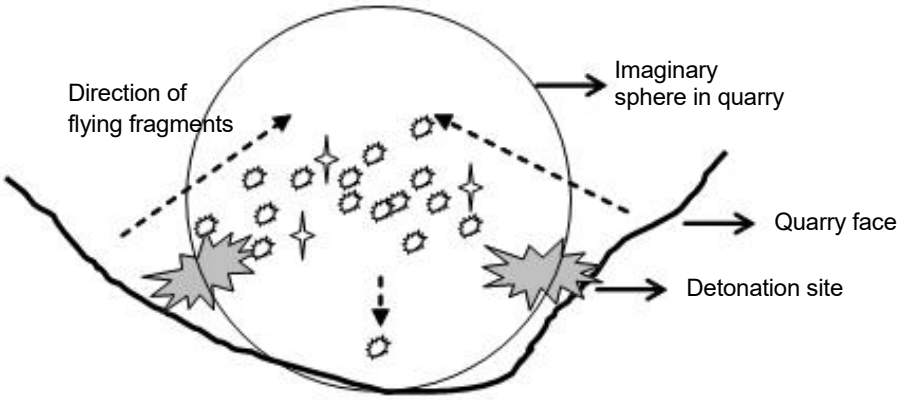


Figure 7.22: Blasting technique that would converge paths of flying fragments

7.3.2.2 Occupational Health and Safety at stone quarry

When appropriate measures are not practised, there could be fatal accidents and health risks to quarry workers. Safety issues of particular interest are general exposure to excessive stone dust, noise; accidents associated conveyor belts and earthmoving equipment. Workers could get head and eye injuries from flying stones if not provided with hard hats and eye goggles. Workers could also fall off cliff edges at the quarry. Blasting explosives are

bombs literally, therefore, care in handling them is an absolute necessity. Consequently, only the licensed blaster should handle explosives and operate detonators under supervision of police officials as blasting regulations in Uganda specify.

This impact would be negative and last 4-5 years construction period. To ensure adequate OHS, mitigation measures below are proposed:

Mitigation

a) Before detonation, a siren should be sounded for all workers to run behind secure protective walls for safety from fly rock.
b) The contractor should use measures such as posters, graphic and text safety warning signs (—*Hard Hat Zone*ll, *Eye Protection Area*ll, —*Hard Shoes Area*ll, etc) and staff briefings to create and continually invigorate occupational safety awareness among workers,
c) The contractor should provide safety equipment such as respiration aids, eye goggles (for use in materials handling areas), hard hats, heavy-duty gloves and hard shoes where necessary.
d) Encourage and respond to feedback from employees regarding workplace safety. For instance the feeling of suffocation from prolonged use of respiratory aids by workers should be considered a sign of overdue replacement.
e) Explosive use and storage must be under Police supervision as required by national security guidelines. Explosives that were not used or those that did not detonate during blasting could go off during material handling, harming personnel and damaging process equipment. Serious accidents and financial loss can occur when such explosive leftovers get exposed to fire or extreme hot temperatures. Good accountability should always be made of all explosives delivered to the quarry and any ones not used should be returned for safe custody at the police station.
f) The company should provide First Aid and other safety measures to take care of health emergencies, should they occur. All activities involving explosives should strictly be carried out following regulations and guidelines as per explosives and blasting licences.
g) Operation of all equipment should be by well-trained workers. Of particular concern are the conveyor assemblies. To avoid accidents, conveyor assembly should have safety guards all workers at the stone crusher enlightened on possible risks associated with conveyors. Emergency switches and warning signs should be well labelled and conspicuous.
h) The above notwithstanding, there should be measures to deal with unexpected incidents. Collapse of quarry faces and product or material stockpiles are infrequent but possible risks in quarrying operations.
i) The possibility of accidents from explosives should be given strong attention. Grave mistakes like smoking or use of electronic communication gadgets (cellular phones and radio call sets) near wired blasting explosives could have terrible consequences in property damage and loss of human life.

7.3.2.3 Quarry Noise

Blasting noise is usually a primary concern of local communities. Two sources of noise are possible at a stone quarry: noise from blasting operations that would mainly affect surrounding communities and onsite noise from quarrying processes and machinery, mostly affecting quarry workers. Excessive blasting noise is a social and health nuisance as it impairs work, school and health services in communities.

Although the stone quarry generates loud bangs of over 100 dBA when explosives detonate, blasting may be an occasional event done once or twice a week. Quarry workers on the other hand are exposed to high noise levels from pneumatic drills, heavy machinery and the stone crushing unit on a daily basis. In absence of effective protection practices and personal protective equipment, this can be a health risk to quarry workers. This impact is negative and would last the 3-4 year construction period.

Mitigation:

Although explosives that would result into lower noise and low severity of flying rock fragments exist, it was established that their importation is a preserve of Uganda government rather than stone quarrying companies. As such, all quarries are limited in use to existing explosives, namely, Magnum Busters, Ammonium nitrate and Gilgenite. It was also established that low-noise explosives yield large rock boulders, which subsequently require secondary blasting, a labour intensive operation that could even generate equally as much noise and flying rock fragments as alternative explosives.

Responsibility to execute noise reduction measures falls on both the contractor and government. These mitigation measures are:

- Careful charging or proportionating explosives before blasting. This is a responsibility of the contractor.
- The contractor should relocate any residents at risk to safer distance (200 meters) from quarry impacts,
- The contractor should use explosives (e.g. Magnum Buster 25-200 mm, Nonel Bench Master 6m/500ms, Exel Handidet 9m, Exel HDT 3m and SPD Electric detonators) renown for low noise/ vibration impacts upon detonation and approved by Uganda Quarries Operators Association.
- Noisy equipment can be enclosed in sound-deadening structures.

7.4 AIR QUALITY

Dust will affect local communities, and quarry workers and a key risk is contracting respiratory ailments resulting from chronic exposure to stone dust. Dust plumes from the crusher represent an incessant loss of sellable material, hence not only a financial loss to the contractor but also a source of occupational health risk to workers. Quality reduction of water sprays notwithstanding, dust suppression at the stone crusher is possible and the company should explore measures that balance product quality and social benefit of workers' health and safety. Health effects associated with dues exposure would be negative and long-term socio-economic impacts.

Mitigation:

- Careful selection of explosives types, amounts charged in each rock bore before blasting and paying attention to the condition of dust hoods and shields fixed around quarry equipment.
- Examining handling operations to minimize height of fall of aggregate during loading onto, or falling from, conveyors and machinery.
- Use of water sprays, especially at the stone-crushing unit, for suppression of airborne dust.
- The quarry should have ―dry techniques‖ for dust control such as use of covers on conveyors or enclosing dust-generating units.

7.5 OPERATION PHASE IMPACTS OF ISIMBA HPP

7.5.1 Positive Impacts

7.5.1.1 Employment

Isimba Hydro Power project site operation and maintenance will provide employment to a number of people which is a long term socio-economic benefit. There is expected to be long-term financial benefit for dam maintenance contractors over entire life of the proposed project. Maintenance contractors are encouraged to employ locally -based workers.

7.5.1.2 Increased Power to the National Grid

With the increasing demand for electricity by the day, and low generation capacity that currently exists, the operation of Isimba HPP would be more than welcome as it would contribute 180 MW to the National Grid. Addition of 180 MW

of environmentally friendly hydropower to the national grid is a long-term socio-environmental benefit that will together with other power stations spur industrialisation and national economic development.

7.5.1.3 Improved Community Infrastructure

Access to the project area will require construction of new roads or improving existing ones. Construction of new or improvement of existing local roads will improve transport in communities with secondary benefits such as enhanced access to health services and efficient local administration functions. This is a long-term socio-economic c benefit for local communities.

7.5.2 Negative Impacts

7.5.2.1 Increased crime and Social delinquency

At end of the construction period, up to 1000 people would have no jobs anymore. If these people cannot use their skills elsewhere, some may resort to crime for survival. Increased crime rates have been reported at end of construction of some hydropower projects in Uganda (e.g. Bujagali HPP). This would be a negative, short or medium term impact but reversible with increased law enforcement in the project area.

Mitigation:

Towards end of the construction phase, the project should conduct re-integration training for workers in areas such as financial management, welding, carpentry and concrete mixing that will be beneficial to former workers.

7.5.2.2 OHS risks to the workers

Power generation at the power house involves water driving turbines which translate into generation of electricity. The associated risks and health hazards involved are electric shocks from voltage testing and de -energized conductors, as well as injuries resulting from rotating equipment. While largely reversible, some impacts such as loss of human life in occupational accidents are irreversible. This poses a medium intensity on the workers as they will be few and skilled, with the project duration being long term; but the sensitivity will be high given the vulnerability of the workers associated with power generation at the power house and its associated maintenance. This gives rise to a major impact severity.

Mitigation:

- Maintenance workers shall undertake concrete weir maintenance only when necessary safety measures are instituted and checked. These include observing power isolation or lock-out, tag-out procedures to de-energize a line to be repaired.
- All workers should be given the right PPE, and safety induction/training before work starts
- Communities should be warned of ongoing maintenance operations and protected from danger such as through installation of temporary signs near worksites.

Adoption of the above mitigation measures should effectively reduce the impact intensity to very low, resulting in a minor impact severity.

7.6 CUMULATIVE IMPACTS

Cumulative impacts are effects of the entire power sector or other new infrastructure developments in the project area. This section identifies some of the potential cumulative impacts occurring potentially and a result of this Project.

7.6.1 Multiple Involuntary Displacement

A few people settled along the proposed power line route had been affected by proposed Bujagali HPP. Being affected by the proposed project is multiple involuntary displacement within a relatively short while.

Social impacts of Isimba HPP could be compounded by other infrastructure projects involving land take or relocation of people. For example, some people who were relocated by proposed Bujagali for example those involved in tourism activities might again be affected by the proposed dam project.

Since numbers of such multiple-displaced persons is often likely to be small compared to overall PAPs population, mitigation through conventional compensation and resettlement should suffice. However, due diligence during the RAP implementation regarding the multiple relocation of certain households will be required by the resettlement plan implementation team, and this will be monitored by an independent monitor.

7.6.2 HIV/AIDS Risk

HIV/AIDS risk during construction of the project is another cumulative impact likely to occur during project implementation. This impact is of a regional scale because workers will migrate from other areas of the country looking for construction employment. In fact after construction, some workers could stay in the project area or move to new places in the country and if exposed to HIV/AIDS risk, this impact is spread to various places.

7.6.3 Economic Development

The project will give rise to a number of economic and development benefits at both national and local levels. The key macro-economic benefit is proving infrastructure necessary to meet the demand for power in Uganda in a least cost manner. Increased availability of power on the national will increase proportion of the national population having access to grid electricity. Availability of power will stimulate entrepreneurship in industrial and commercial enterprises in many places around the country such as local grain mills, timber sawing mills, health clinics and village telephony all of which would spur economic development.

7.6.4 Improved Social Services

Lack of electricity limits the medical services available in rural areas of Uganda. Without electricity supply healthcare facilities are unable to perform medical operations, dentistry or preservation of medical cultures, samples and related resources. Availability of electric power in rural areas would enable this and also attract private-sector investment in the health sector to meet increasing demand for healthcare services.

The improvement of the access roads is an improvement to the infrastructure of the project area. Local people will benefit through an improvement transport systems, less dust along the roads and widening of roads could facilitate trade in the area.

8 SOCIAL MANAGEMENT PLAN

This Social Management Plan (SMP) is a program of recommended mitigation plans and activities involving organizational capacity, training, community engagement, monitoring and reporting. A Resettlement Action Plan (RAP) has been separately prepared to cover land acquisition, resettlement income losses and compensation. The aspects of the SMP detailed in this report, and the RAP will be incorporated into project implementation contractual requirements and monitoring. The objectives of this SMP are to:

- Avoid, or where avoidance is not possible, minimize, mitigate, or compensate for adverse impacts on employees and affected communities,
- Ensure that affected communities are appropriately engaged on social issues that could potentially affect them.
- Recommend various small development programs that are aimed at mitigating some of the more serious impacts identified by this social impact assessment.

8.1 SOCIAL MANAGEMENT PROGRAMME

The plan presents a program by which UEGCL and contractor(s) will assure initial and ongoing compliance with social requirements and guidelines of funding agencies supporting Isimba Dam implementation.

8.2 ORGANIZATIONAL CAPACITY

For successful implementation of this program, a Project Consultative Committee comprising 5-6 representatives of PAPs selected from each affected sub-counties to work with UEGCL during the resettlement process. The committee which is selected by PAPs shall be composed of women, youth and disabled person‘s representatives . The committee shall meet once in every three months, i.e. four sittings in a year to review progress made and address concerns raised by PAPs. The project consultative committee shall be responsible to pass project information to project affected persons and translate flyers into local languages. It will also as the company grievance committee that will address grievances from community as they are received.

8.3 TRAINING

The employees and contractors who will be engaged either during construction or management of some of the components of the project will have to be trained in order to fully participate in implementation of the social management plan. Scheduling and coordination of social training exercises aimed at facilitating implementation of this Social Management Program should be conducted by UEGCL‘s senior Social Team Manager and Environmental Officer. The training shall include instruction on hazard recognition, potential health effects, and potential social impacts as discussed in this report, and the use of personal protective equipment and the donor requirements. Areas of training will include;

a) UEGCL‘s (or industry standard) Environment Health and Safety Policy and procedures associated with dams;
b) Health and safety requirements to international standards, and the project standards, ensuring this fits with donor standards (only in the case that Uganda policy standards are insufficient);
c) First Aid;
d) Cultural awareness;
e) HIV/AIDS training and awareness;
f) Skills development or financial advice to be conveyed to PAP‘s;
g) The output of the training will be the ability of the contractor to prepare the contractor‘ own environmental and social safeguards management plan specific for their project.

8.4 COMMUNITY ENGAGEMENT

Throughout implementation of Isimba dam project, UEGCL's Social Team shall encourage participation and consultation of project affected communities as a continuous process. Specific objectives of on -going engagement throughout the Project life-cycle are to:

- Provide platform for participation in identification of social impacts, planning and implementation of mitigation measures;
- Provide a platform for UEGCL to respond to people_s concerns and resolve stakeholder concerns before they turn into full grievances;
- Engage with stakeholders on priorities for social development; and to ensure information flow and mechanisms for engagement during the operations of the Project, local political and technical leaders should be engaged in this process.

The contractor should be involved in community engagement alongside UEGCL Social Team, in order to specifically keep the community in touch with the construction program, information on what impacts residence may experience during construction, what contractors will do to reduce impacts and what approaches (simple and cheap methods) the community members can also do to reduce impacts of construction even further.

Table below summarises potential project impacts, mitigation and responsibility for mitigation actions.

Table 8-1: Project Construction Phase impacts management

Activity	Adverse impacts	Mitigation actions	Implementation schedule/ stage	Responsibility
Displacement of people	Loss of assets and livelihoods	Provide equitable and timely compensation. Ensure consultation/ awareness about construction schedule is provided to the PAP to ensure loss/ continuation of livelihood crops on acquired land	Pre-construction/ planning	UEGCL
		Integrate able affected people into project construction labor force.	Pre-construction/ planning	UEGCL
		Facilitate relocation, especially to vulnerable PAPs.	Pre-construction/ planning	UEGCL
		Minimize cash-based Compensation in favor of other compensation methods. Provide advice on wise financial resource use.	Pre-construction/ planning	UEGCL
	Economic displacement	Compensate economically displace PAPs to full replacement cost	Pre-construction/ planning	UEGCL
		Provide targeted assistance e.g. alternative livelihoods through training.	Continuous	UEGCL
		Restore income-earning capacity and standards of living.	Pre-construction/ planning	UEGCL
Operation of workers camp	HIV/AIDS risk	Contractor should have HIV/AIDS Policy as a contractual obligation and undertake	Construction	Contractors

Activity	Adverse impacts	Mitigation actions	Implementation schedule/ stage	Responsibility
		health awareness program for workers. Provide free male and female contraception materials (e.g. condoms) to workers. Institute a no-fraternization policy among workers and sex workers at the camp. This also includes Gender separate sleeping quarters and ablution facilities for the case that there are males and female workers living in the camps		
Hauling/ transportation	Traffic hazards/ accidents	Ensure presence of traffic management plan (specifying speed limits, signage, journey plans, etc). This plan along with health and safety, will be approved by UEGCL and project Engineers.	Construction	UEGCL Contractor
	Noise and vibration and damage to local structures	Ensure access roads are safely distant from impact receptors (especially mud and wattle dwellings). Ensure communities are aware of impacts and mitigation measures.	Pre-project (detailed design and implemented at construction Continuous from pre-project and throughout construction	UEGCL, contractor, NEMA and District Environment Offices UEGCL & Contractor
Project construction	Spread of diseases (especially HIV/AIDS)	Contractor should have HIV/AIDS Policy as a contractual obligation and undertake health awareness program for workers. Contractors will make agreement with Medical facility for severe medical problems, appropriate First Aid and emergency equipment will be provided in camps, workshops, vehicles and onsite	Construction	UEGCL Contractor Contractor
	Pressure on social infrastructure and facilities	Use of local labour force as much as possible and provision of social facilities.	Construction	Contractor
	Social delinquency	Engage local leaders in maintain law and order near/ around workers camps.	Construction	Contractor
	Population influx Culture shock for employees	To minimize population influx into project areas, UEGCL shall require and encourage construction contractors to have a policy of hiring unskilled labour from local areas. Support and develop alternative livelihood projects.	Construction	Contractor
Power plant operation and maintenance	Electrocution of maintenance crews	Ensure crews are adequately trained, experienced and follow standard procedures (e.g. lock-out, tag-out).	Operation/ maintenance	UEGCL

8.5 MONITORING

As part of this SIA, a Community Monitoring Plan has been developed to define monitoring activities that will place, when they will take place and conducted by whom. It also identifies indicators and data collection methods, training and capacity building needs of UEGCL personnel to implement the plan. As indicated on the monitoring schedule below, monitoring of social issues will be the responsibility of the UEGCL Social Team Manager with technical support from the Environment Officer. To ensure effective and reliable data collection, key UEGCL staff involved in monitoring should be conversant with indicators to be monitored and data collection techniques.

Results of the monitoring program will be reviewed by project management on an ongoing basis to take stock of the social management performance of project. If adverse social changes occur as a result of the Project, commensurate remedial measures must be implemented.

Specific details of any mitigation measures associated with unforeseen project-related effects will be developed based on the results of the monitoring. Monitoring (external) should be done on a quarterly basis and internal monitoring will occur on a monthly basis as the minimum standard and if a breach is found internal monitoring will make follow-up checks and audit. Continued negative results of monitoring may indicate a more regular regime of checks and information dissemination to implementers of these social mitigation measures.

Social monitoring is proposed for the following areas:

a) Expenditure patterns,
b) Investment undertakings during and after compensation as well as during project implementation,
c) Health and safety,
d) Household sizes,
e) School enrolment,
f) HIV/STD prevalence,
g) Employment and skills development,
h) Public consultation and disclosure process; and,
i) Impacts on local employment levels to include:

    i) Number of local individuals directly employed by the project;
    ii) Number of households directly employed by the project;
    iii) Entrepreneurial activities associated with the project;
    iv) Changes in income profiles; and,
    v) Changes in overall community development.

j) Consultation and information:

    i) Number of meetings held, attendance, minutes,
    ii) Number of brochures and other project documentation disclosed to the public,

k) Employment: Number of new employees by categories (unskilled, semi-skilled, skilled, professionals), following ratios of:

    i) unskilled: local versus total,
    ii) semi-skilled: local versus total,
    iii) Skilled: local versus total.

Any improvements to the process will be identified and implemented.

Table below shows proposed monitoring plan.

Table 8-2: Social Monitoring plan

	Monitoring area	**Indicator**	**Method**	**Frequency of Measurement**	**Responsibility**
1	Household income	Expenditure patterns	Surveys	Annually	UEGCL / MEMD
2	Investment undertakings during and after compensation as well as during project implementation,	Investments undertaken	surveys	Annually	UEGCL / MEMD
3	Community Health and safety and security	Number of health related cases reported	checklists	Quarterly	UEGCL / MEMD
4	Household sizes,	No of people per household	surveys	Annually	UEGCL / MEMD, Sub county technical staff.
5	School enrolment,	No of students in schools	surveys	Annually	sub county staff, local council leaders
6	HIV/STD prevalence	Available community data from Baseline and Number of new cases registered	Reports from health facilities & medical camps.	Quarterly	UEGCL / MEMD, Sub county technical staff, AIDS NGOs.
7	Employment and skills development,	No of PAPs employed	surveys	Annually	UEGCL / MEMD
8	Public Involvement / Engagement	Public consultation and disclosure plan (PCDP) in place Number of meetings	Consultations	Quarterly	UEGCL / MEMD

8.6 REPORTING

Reporting of incidents and accidents as well as conflict in communities within the project area will be the responsibility of the contractor but will be compiled by UEGCL's supervisory Social Team which will be responsible for reporting issues from communities and wider community to UEGCL's Project Manager. The community should be able to report directly to the Social Team or through the RAP implementation committee. For incidents and accidents, there will be an incident and accident register that will be kept by UEGCL and contractor. UEGCL grievance committee will also have a register for complaints from communities. The project consultative committee will be responsible to pass on information to PAPs, translating project information flyers and addressing concerns of project affected people. Members of the Project consultative committee are selected by PAPs from people they feel can properly represent them. The committee normally constitutes 5 to 6 PAPs and includes representatives of women, youth and disabled persons. An annual reporting mechanism will be through a social audit which will review impacts and develop measures to mitigate them in the following year of project implementation. Reports from these actions will also be submitted to project funding agency at a frequency they prescribe to UEGCL.

8.7 BUDGET FOR SOCIAL MANAGEMENT PLAN

The proposed budget for monitoring the above social management system is presented in table below.

	TABLE 8-3: SOCIAL Monitoring Plan BUDGET					
	Activity	**Frequency**	**Responsibility**	**Cost (USD)**	**Total Life time cost (5yrs)**	**Budget notes**
1	**Formation of Project Consultative/Monitoring Committees**			**13,000**	**13,000**	
2	Project Development Committee (PDC)	One Off	MEMD/UEGCL	8,000		Facilitation for setting TORs for key project development stakeholders for policy guidance and overall project realisation
3	District Level Committees (DCC)	One Off	MEMD/UEGCL	3,000		Facilitation for setting TORs for district level stakeholders, meeting venue etc
4	Sub County Level Committee (SCC)	One Off	MEMD/UEGCL	2,000		Facilitation for setting TORs for Sub County level stakeholders, meeting venue etc
5	**Facilitation of LC 1 local leaders during community engagement)**	Quarterly	UEGCL	**3,000**	**60,000**	Each LC Chairperson in 16 villages facilitated per quarter for 5years
5	**Monitoring (Aspects listed in table 23)**			**10,500**	**210,000**	
	Internal	Monthly	UETCL	2,500		Internal Social Monitoring team
	External**	Quarterly	PMC/PSC/PMC/ UEGCL/MEMD	8,000		External party outside the implementing agency/team
6	**Committee meetings (review of issues arising and crafting remedies)**			**18,000**	**360,000**	Note: It is planned that this social management plan will be implemented over a 5 year period: 1 year during RAP implementation, 3 years during construction and 1 year during the monitoring phase post RAP implementation)
7	Lead Agency Steering Committee	Quarterly	NEMA	5,000		Facilitation for meetings of key monitoring stakeholders from lead agencies like NEMA,

						UWA, NFA, DWD, MEMD, MTWA, etc
88	Project Development Committee	Quarterly	MEMD	8,000		Facilitation for meetings of key project development stakeholders for policy guidance and overall project realisation
9	District Level Committees	Quarterly	UEGCL	3,000		Facilitation for consultative and update meetings of district level stakeholders, meeting venue etc
10	Sub County Level Committee	Quarterly	UEGCL	2,000		Facilitation for consultative and update meetings of Sub Countyt level stakeholders, meeting venue etc
11	**Reporting**	Quarterly	UEGCL/PMC	**10,000**	**200,000**	Cost is for five years
	Sub Total			**54,500**	**843,000**	
12	**Safety Net**	Annually	UEGCL/PSC	**8,175**	**126,450**	For purposes of managing residual impacts
	Grand total			**62,675**	**969,450**	

8.8 BUDGET FOR OTHER COMMUNITY DEVELOPMENT INITIATIVES

The project will consider community development interventions as part of its corporate social responsibility (CSR) initiatives. Consultations will be done with local leaders and community representatives to identify and prioritise community needs so as to establish urgent or priority interventions that can be supported by the project.

Table 8-4: Estimated budget for community development initiatives

Note:

Table 8-4 Community Development Activities Budget

#	Item	Amount (Ugx)	USD
1	Water supply	3,628,680,000	1,411,937.74
2	Education	5,363,680,000	2,087,035.02
3	Health	5,997,400,000	2,333,618.68
4	Market & sanitary facilities	2,180,200,000	848,326.85
5	Basic skills training and micro-credit	2,767,000,000	1,076,653.70
6	Fisheries	537,240,000	209,042.80
7	Agriculture	5,053,600,000	1,966,381.32
8	Road improvement	2,802,000,000	1,090,272.37
9	Rural electrification	3,300,000,000	1,284,046.69
10	Promotion of tourism	598,400,000	232,840.47
	TOTAL	**32,228,200,000**	**12,540,155.64**

Monitoring costs are included in activities lumpsums

The 4-5 years of construction will bear both positive and negative social impacts that can be avoided or mitigated with recommendations proposed. Overall, the project will have immense long-term social-economic benefit for the country in terms of increased hydropower added to the grid hence spurring local and national development.

REFERENCES & BIBLIOGRAPHIES

1. Edward Mugabi 2004: Uganda's Decentralisation Policy, Legal Framework, Local Government Structure and Service Delivery (Paper prepared for the First Conference of Regional Assemblies of Africa and Europe organized by the Regional Assembly of Tuscany under the patronage of the Italian Presidency and the United Nations Department of Economic and Social Affairs (UNDESA

2. Synellakis et al 2006: Uganda Energy Sector Policy Over view Paper.
3. Focus on Uganda 2009: the Power Sector Strategic Plan 1999.

4. Florence, N. (2010, August 27). Uganda's Districts since independence. Retrieved September 23, 2011, from New Vision: *http://www.newvision.co.ug/D/8/12/730140*
5. Elizabeth Kyomugisha 2008: Land Tenure and Agricultural productivity in Uganda. http://www.ifpri.org/sites/default/files/publications/ussppb05.pdf.

6. SYMPOSIUM: Uganda after Idi Amin and Milton Obote (Hamburg, Germany, 29th September 2008). —Investment Opportunities in Power Generation in Uganda: Presented by Hon. Daudi Migereko Minister of Energy and Mineral Development, Uganda

7. MEMD, 2003 (Ministry of Energy and Mineral Development): Ministry's Mandate. http://www.energyandminerals.go.ug/mission.php.

8. World Bank 2011: Social Safe Guard Policies

9. Lawerence Shannon 2005: Retreat from the safeguard policies: Recent Trends undermining Social and Environmental Accountability at the World Bank. http://www.edf.org/documents/4279_RetreatSafeguardPolicies_0105.pdf.

10. IDA, 2010: Uganda: Maintaining Growth—Moving Towards Structural Transformation

11. Edward Mugabi 2004: Uganda's Decentralization Policy, Legal Framework, Local Government Structure and Service Delivery (Paper prepared for the First Conference of Regional Assemblies of Africa and Europe organized by the Regional Assembly of Tuscany under the patronage of the Italian Presidency and the United Nations Department of Economic and Social Affairs (UNDESA), Florence, Italy.

12. Uganda Bureau of Statistics (UBOS), 2002: Population and Housing Census

13. Cultural Survival 2010: Partnering with Indigenous Peoples to Defend their Lands, Languages and Cultures: Uganda Country Profile. http://www.culturalsurvival.org/Uganda+Coutry+Profile?gclid=CPfv4em32KoCFRJc4Qodl0dF7w.

14. GOU (1999): Uganda Participatory Poverty Assessment Process, Perspective of the poor.

15. Synellakis and Arudo, 2006: Education sector policy Over view Paper. http://chet.org.za/manual/media/files/chet_hernana_docs/Uganda/Other/Education_Policy_Overview_Uganda.pdf

16. Boseley Sarah, 2008: Health in Uganda. http://www.guardian.co.uk/katine/2008/mar/06/katinegoalbackground.background.
17. Fountain Publishing, 2005 - Uganda Districts, Information Handbook. Expanded Edition2005 - 2006. ISBN 9970 02 429 9.

18. IFAD 2003: Gender and Rural poverty. www.ruralpovertyportal.org/web/guest/topic/home/ tags/gender.
19. Ministry of Energy and Mineral Development, 2002: The Energy Policy for Uganda. MEMD 2002.
20. Ministry of Energy and Mineral Resources, 1994: State of Energy Report for Uganda. MEMD 1994.
21. Ministry of Energy and Mineral Development 2009: Ministry's Mandate. http://www.energyandminerals.go.ug/mission.php

22. UBOS (Uganda Bureau of Statistics) 2009: Profiles of the Higher Local Governments
23. UBOS (Uganda Bureau of Statistics) 2002: Population and Housing Census

24. World Bank 2011: Social safeguard policies. http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/EXTLACREGTOPSOCDEV/0,,contentMDK:20547266~menuPK:1308602~pagePK:34004173~piPK:34003707~theSitePK:847655,00.html

25. MEMD (2001): Rural Electrification Strategy and Plan Covering the Period 2001 to 2010,

26. Ministry of Energy and Mineral Development, Government of Uganda, Kampala, February 2001

27. MEMD (2002): The Energy Policy for Uganda, Ministry of Energy and Mineral Development, Government of Uganda, Kampala, September 2002

28. MEMD (2007): The Renewable Energy Policy for Uganda, Ministry of Energy and Mineral Development, Government of Uganda, Kampala, November 2007

29. MEMD (2008): Annual Report, Ministry of Energy and Mineral Development, Kampala

30. MEMD (2010): Inception Report for feasibility study for the development Of Isimba Hydro-Power Plant and associated transmission line and sub-station inception report.
31. MEMD (2012): Joint Sector Review.

32. MoLG, 2009: Profiles of the higher Local Governments 2009

33. Mukono District Population and Housing Census Analytical Report, 2007

34. Mukono District Statistical Abstract, 2006

35. National Biomass Study, Ministry of Water and Environment, Government of Uganda, Kampala, November 2003

36. Poverty Eradication Action Plan 2004/5 - 2007/8, Ministry of Finance, Planning and Economic Development, Kampala, December 2004
37. R. Shiflett, and R. Tempchin, for presentation at 89th Annual Meeting & Exhibition, Air & Waste Management Association, Nashville, Tenn., June

38. The Electricity (Establishment and Management of the Rural Electrification Fund) Instrument, 2001, Uganda Gazette No. 56 Vol. XCIV, Kampala 11th December 2001

39. The Uganda Forestry Policy, Ministry of Water and Environment, Kampala: 2001
40. The Republic of Uganda, National Environment Management Policy (1994)
41. The Republic of Uganda, The Energy Policy (2001)
42. The Republic of Uganda, National Development Plan (NDP, 2010)
43. The Republic of Uganda, National Water Policy (1999)
44. The Republic of Uganda, Wetlands Policy (1995)
45. The Republic of Uganda, National Gender Policy (1997)
46. The Republic of Uganda, HIV/AIDS Policy 1992
47. The Republic of Uganda, Uganda Resettlement/Land Acquisition Policy Framework (2002)
48. The Republic of Uganda, Electricity Act, Cap 145
49. The Republic of Uganda, Constitution of the Republic of Uganda (1995)
50. The Republic of Uganda, Land Act, Cap 227
51. The Republic of Uganda, Local Government Act (1997)
52. The Republic of Uganda, Land Acquisition Act (1965)
53. The Republic of Uganda, Occupational Health and Safety (OHS) Act 2006

54. The Republic of Uganda, The Physical Planning Act, 2010
55. The Republic of Uganda, Historical Monuments Act (1967)
56. NWDR(National Water Development Report), 2005: National Water Development Report: Uganda. Water a shared responsibility (2006). Available on: http://unesdoc.unesco.org/images/0014/001467/146760e.pdf.
57. UBOS (2002): Uganda Population and Housing Census. Analytical Report, Abridged Version,
58. Uganda Bureau of Statistics, Kampala, June 2006

59. UBOS (2009/10): Uganda Household Survey, Uganda Bureau of Statistics, Kampala
60. UBOS (2010): Statistical Abstract, Uganda Bureau of Statistics, Kampala
61. UBOS (2012): Statistical Abstract, Uganda Bureau of Statistics, Kampala
62. UNDP (2007) Millennium Development Goals: Uganda's Progress Report 2007, UNDP, Kampala, October 2007
63. USAID: Water and Sanitation Profile. Available at: http://waterwiki.net/images/a/ab/USAIDUgandaWatSanProfile.pdf. 8th September 2011

ANNEX A - SURVEY QUESTIONNAIRE

Socio-Economic Household Questionnaire for Isimba Hydro Power Project (Flood area)

Conducted by:

AIR WATER EARTH (AWE) LIMITED

Environmental, Civil Engineers & Project Management Consultants

M1, 27 Binayomba Road, Bugoloobi
PO Box 22428, Kampala
Office Tel. +256-41-4268466
C: +256-78-2580460/077-2496451
E: mail@awe-engineers.com
W: www.awe-engineers.com

December 2012

Household Survey

Name of Interviewer_____ **Date**_____

A. GENERAL INFORMATION

A1. Name of PAP: _____**A2.** Sex____**A3.** Village: _____**A4.** Parish_____**A5.** Sub-county:_____ **A6.** District: _____ **A7.** GPS Coordinates: _____

B. INFORMANT'S PROPERTY INFORMATION

B1. What is your status in relation to land ownership? **B1.** Owner___, **B2.** Tenant___, **B3.** Licensee___

C. SOCIAL GROUP

C1. Age_____, **C2.** Nationality_____, **C3.** Tribe _____, **C4.** Language _____,

C5. Marital status: _____, **C6.** Religion_____

D. Details of people living in this household

	Please give the following information of household members					
No.	Name of Members	Sex (Code)	Relationship to HH	Age (Completed Years)	If Age >5 Education (Code)	If Age <15 Occupation (Code)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

	Educational level code	
	1. Illiterate	2. Just Literate
	3. Completed Primary School	4. Completed lower secondary school
	5. Completed Secondary school	6. Completed technical school
	7. Some University/college	8. Completed University/college
	9. Completed post-graduate	
Sex Codes	1. Male	2. Female
	Occupation Code	
	1. Farmer	2. Own Private Business/Trade
	3. Employee of private Business	4. Government service
	5. Other	

1. Total number of people living in the household?

   _____

2. Number of people living in the household who are under 5 years of age?

   _____

3. Number of children between 5 and 15 years old in the household?

   _____

4. Number of children between 5 and 15 years old in the household who are not attending school?

   _____

E. LIVELIHOOD INFORMATION

E1. What is the main source of income of the household?

1=Salary,

2=Agriculture,

3=Business on land,

4= Business elsewhere,

5=Rent from affected land,

6= other (specify) _____

E2. What mode of transport do you use to get to work?

1. No need to travel (I work at home)
2. By public means
3. By personal vehicle
4. By Bicycle/motorcycle
5. By foot
6. Others (specify)

b) What is the distance from your household to your place of work? _____

E3. What is your monthly income from your main source of income? _____

E4. What would you estimate to be the total monthly expenditure for this HH? _____

E5. Are there family members who contribute to household income?

1=Yes

2=No

E5. If Yes, how many people contribute money to the total household income?_____

E6. How much do they contribute in shillings per month?_____

E7. SOCIO-ECONOMIC INFORMATION		
Item Description	Cash earned last year (Ug. Shillings)	In kind/ barter* e.g. Cow/Labor/Grain
Income from household enterprises (Note: Together with a PAP, you can make calculations from a person's description of sold goods.)		
Crop farming (name key crops):		
Other agricultural income (e.g. livestock, poultry)		
Non-agricultural income		
Property income		
Rent received from rented property (land, housing)		
Benefits		
Family allowances/social security benefits		
Remittances and assistance received from others		
Other (inheritance, alimony, scholarships, etc)		
Employment		
Formal employment income		
TOTAL		

F. PRODUCTION SYSTEMS

F1. What is the land tenure for your land?_____

F2. If cultivation of crops; what are the main crops grown?

1=Maize,
2=cassava,
3=sweet potatoes,
4=Beans,
5=Rice,
6=Sugarcane,
7=Others (specify)_____

F3. What is the monthly income or how much do you get per season?_____

F4. Where are these crops grown?

1. On affected land
2. Land elsewhere
3. Others (specify)_____

F5. Who owns the land on which you grow crops?_____

F 6. What do you use the agricultural products for?

1. For use within the household = 1
2. Selling on the market = 2

F7. Where do you usually sell your produce?

1= Do not sell at all(for use within the household)
2= Local market
3= Outside market (far from home)
4= Outside the district
5= Other: _____

F8. If you indicated "2" in the previous question, what is the distance of the market from the homestead? (in meters)

F9. Does this HH keep any animals or poultry? 1=Yes, 2=No

F10. If yes what are they? _____

F11. What problems do you experience in agricultural production?

1= Drought
2= Lack of sufficient land
3= Lack of tools like hoes
4= Lack of markets
5= Lack of good access to market

F12. Where do you graze the livestock?

1= Private own land
2= Private borrowed land
3= Customary land
4= Public land
5= Hired
6= Other:_____

F13. What problems have you experienced in livestock rearing?

1= Drought
2= Lack of pasture land
3= Livestock disease
4= Cattle theft
5= Expensive drugs
6= No help from government

G <u>DETAILS OF DWELLING</u>

G1. Do you:_

1. Own the house you live in
2. Rent
3. Other:_____

G3. Indicate all the materials used to construct the walls of your main residential structure:

1. Un-burnt brick
2. Mud and poles
3. Timber
4. Thatch/straw
5. Burnt brick
6. Others_____

H. HEALTH AND SANITATION

H1. Name commonest diseases affecting your family?

1= Malaria
2= Respiratory tract infections (RTI)
3= Diarrhea
4= HIV/AIDS/STD
5= Measles
6= Intestinal worms
7= Hernia
8= Others (specify)_____

H2. How many times per year do members of this household normally go to health centers or hospital?

Men:_____ (times/year); Women:_____ (times/year) and Children: _____(times/year)

H3. How much do you spend on treating the most common diseases?_____

H4. How does a round trip to the nearest hospital cost?_____

H5. What type is your nearest health facility?

1. Government Hospital
2. Health centre I
3. Health centre II
4. Health centre III
5. Private hospital
6. Community Health centre
7. Other, specify_____

H6. Do you use the above health facility?

1. Yes
2. No (why)_____

H7. If yes, how far is your nearest health facility?

1. 1km or less
2. > 1km-2.5km
3. >2.5km-5km
4. >5km-20km
5. >20km
6. Does not know

H8. What means of transport do you use to the health facility

1. Walk
2. Bicycle
3. Bodaboda
4. Car
5. Other, specify_____

H9. Where do you dispose of your human waste?

1. Pit Latrine
2. Hole in ground
3. Bush
4. Communal Pit latrine
5. Flash toilet
6. Other, specify_____

H10. What is the source of your water?

1. Pond
2. unprotected well
3. protected well
4. spring
5. borehole
6. Tap water (stand pipe)
7. Piped water in house

H11. What is the distance to the water source?

1. 100 meters
2. 100-500 meters
3. 1-1.5 km
4. Over 5 km

H12. How does the household dispose of refuse?

1. Burn
2. Dig a hole and bury
3. Throw at bark yard(garden)
4. Dispose at communal waste dump
5. Compost pit
6. Other (specify)_____

I. EDUCATION

11. How many members in your H/H can read and write?

12. How do children travel to school? _____

I3. How far is the nearest primary school? _____

I4. Is primary school private or government? _____

I5. How far is the nearest secondary school? _____

I6. Is secondary school private or government? _____

J. Energy

J1. What fuel do you use in the household for cooking?

1. Firewood
2. Gas
3. Charcoal
4. Solar
5. Kerosene
6. Biogas
7. Electricity
8. Other

J2. What fuel do you use in the household for Lighting?

1. Firewood
2. Gas
3. Charcoal
4. Solar
5. Kerosene
6. Biogas
7. Electricity
8. Other

K. Sites of cultural/ religious significance:

1. Are there graves belonging to the homestead situated locally? Yes=1, no=2
2. Total number of graves at this site
3. Are there any areas of spiritual significance that you consider are the property of your household?
    1. Yes=1.
    2. No-2
4. If yes specify which?_____

L. Movable assets:

L1. Do you have any of the following available in your household in a working condition? If yes please circle and indicate the number of working items that are available to the household.

I) Item	II) Number	I) Item	II) Number
a. Mobile phone		b. Ox cart	
c. Telephone		d. Wheelbarrow	
e. Radio		f. Sewing machine	
g. Television set		h. Maize mill	
i. Car		j. Hand hoe	
k. Bicycle		l. Generator	
m. Tractor		n. Chair/stool	
o. Plough		p. Beds	
q. Table		r. Mosquito net	
s. Stove			

L2. Perceived challenges and needs:

1. What are the biggest challenges with which you as a household has to cope?(e.g employment, lack money, education, food etc)_____

2. What are your most important needs as a household?_____

M. Food security at household level.

1. How do you secure food?
    _____
2. Please, tell about feeding that your family have (Circle appropriate)
    a. All members of our family have hot meal twice a day
    b. All members of our family have one hot meal every day
    c. We have hot meal 2-3 times a week.
    d. Other _____
3. What do you normally have for breakfast?
    _____
4. What do you normally have for Lunch?
    _____

5. What do you normally have for Dinner?

_____

6. What is your household expenditure per month?

_____

N. KNOWLEDGE ON HIV/AIDs

N1. Is HIV/AIDs common in this area? 1=Yes, 2= No

N2. What do you think spreads HIV/AIDS?

N3. Do you think HIV/AIDs has increased in this area? 1=Yes, 2= No

N4. If yes, what do you think has made HIV/AIDs increase?

N5. Who do you think are the population groups most affected by HIV/AIDs in this area?

1. Children below 5 yrs
2. Male children (5-18 yrs)
3. Female children (5-18 yrs)
4. Pregnant women
5. Women
6. Men
7. Elderly

N6. Has your household been affected by HIV/AIDs? 1=Yes, 2= No

N7. Do you know methods that are used to control/prevent the spread of HIV/AIDs in your area?

1=Yes,

2= No

N8. If yes, what are they?

1. Abstain
2. Condoms
3. Faithfulness
4. Others (specify)_____

N9. Have you ever received any sensitization about HIV/AIDs in your area? 1= Yes. 2= N0

N10. If Yes, from whom did you receive the sensitization from?

_____

THANK YOU

ANNEX B - CONSULTATION RECORDS

Meeting 1: Isimba Hydro Power Project: Stakeholders workshop to discuss Environmental and Social Impact Assessment (ESIA) held on 13th December 2012 at Crested Crane Hotel, Jinja

Purpose of meeting:	To obtain their views on the proposed project.
Date held & place:	13th Dec, 2012 Crested Crane Hotel, Jinja.
Present:	Eng. Lammeck KAJUBI - Environmental Engineer (Team Leader) Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer Pamela K. TASHOBYA- Sociologist
Issues raised:	
On Compensation	• The compensation rates set by the District Land Board should be revised so that the PAPs are fairly compensated. • Compensation should be transparent and given to PAPs on time. • The project should consider compensating people who grow seasonal crops since they depend on them for survival because when compensation delays people replant but are usually not compensated for the additional crops. • Tourism activities going to be affected were mentioned; however there was no provision on whether they will be compensated. • Q: How will compensation of land be made? • A: This will depend on the land value • Q: Does government compensate for graves and cultural resources? • Yes • Will young Perennial crops be compensated? • A: Yes • Will houses likely to be damaged by the project during construction phase be compensated? • A: Yes • Q: How are non-permanent structures compensated? • A: • Q: Does government compensate structures that have no building plans? • A:

On the project	• Q: Will it possible for the communities to get a bridge that connects Kayunga to Kamuli Districts? • A: • Q: How long will the project development be in place because this is useful for entrepreneurs who may wish to develop services that support project development? A: • All HEP developments seem to be concentrating on River Nile, What effects will the development have on other planned projects along the Nile? • A: All the feasibility studies show that it is only the Nile that can give 7,100MW and that is why there is more emphasis on the Nile for Hydro power. • Incase many dams are constructed on River Nile, won't there be a backwash effect in future creating floods in Jinja District? • A: WRMD/DWD is working on a flow cascading plan to avoid River swells/floods
On Tourism	• What are the immediate tourism resources to be affected by the project? • A number of people in Jinja District depend on tourism both directly and indirectly for example Jinja economy depends on tourism. Is there an alternative site that can be developed so as to save tourism? • Q: How will people whose livelihood depends on tourism services be compensated (for example Kayaking instructors)? • A: Retooling of skills. There will be a process of skill development in areas where People will be affected. • The Project should put in place measures for relocating people involved in tourism.
On Transport	• The community desired to have a bridge to connect to Kamuli and Kayunga, Is it possible? • A: The government is not in support of having a bridge for security reasons. •
On Sensitization	• Residents of Nampanyi village alleged not having been sensitized enough. Complaints were received by RDC Kayunga District where people refused to sign consent forms of property surveyors because of fear of taking away their land. • Communication to the general public about the project should be done earlier by a combination of traditional media, public relation and mass media. • The project team should have a development communication specialist who will prepare people for eventualities likely to take place for example loss of jobs after construction.
On Design	• Q: What considerations were taken to choose the best location of the dam and what were the alternatives? • A: Detailed geological assessments have been undertaken ad a number of parameters were used to choose the best location.

On benefits	• The project should involve the transfer of knowledge to local people so that when developing a project few expatriates are brought on board. • As a long term benefit, the project should look again at the road connecting from Kamuli to Kayunga Districts. If the problem is security, it can be controlled by government because the benefit is greater. • A: The problem is not only security but also the weight on the bridge however this will be discussed and feedback brought back. • A Rural Electrification program should be recommended in case communities have no power. • Kisozi Sub-County sees less than 10 % benefit from the project, therefore request that as much as design is already done, the project should set up facilities such as schools, health centers or roads as a cooperate social responsibility. • Q: Is there a plan for revenue/project benefit sharing with stakeholders? • A:
On Land	• Q: Who gives consent on surveying affected land? Is it the land owners or squatter? • A: The land owner. • Q: Where will the PAPs whose land is going to be affected be resettled? Is there enough land? • A: Resettlement sites will be identified by the client
On Stakeholder Consultation	• The project team should include a Natural Resources Economist on the list to do the cost-benefit analysis. • Sub-County officials should always be involved in consultation meetings. • Q: When is surveying team going to survey Kamuli District? • A: January 2013. • The project should come up with a Sub-committee of stakeholders to be part of project monitoring team. • Some technical personnel such as Community Development Officers (CDOs) should be involved when sensitizing communities. • Long term effects such as effects on vibrations due to the project should be addressed to communities. There is need to engage with the CDOs to be involved in sensitization. • Q: How will community mobilization and sanitization of affected villages be done?
On Reservoir	• The reservoir extent needs to be clear because approximately 14km of the River stretch which will be covered by the reservoir will inundate white water rafting and completely shut down tourism and knock off effects in some districts.
On Crime	• There are repercussions of a dam after it has been built. People employed by the project end up contributing to crime after the project ends. What measures have been put in place for such cases?
On Requirements	• World Bank requirements take precedent over Uganda Government requirements and this should be communicated to Government.
On kalagala Offset	• Mabira Management Area and Kalagala offset if affected by the project should be compensated. • The project should provide a good monitoring plan for Kalagala offset. MOWE developed a good monitoring plan; the project can look at their plan and borrow best practices.

On Biological Resources	• Biological issues such as fisheries and dams should be addressed in the report. • There is need for site specific studies on directly and indirectly affected areas such as quarry sites.
On Occupational Health and Safety (OHS)	• There should be a comprehensive OHS plan for the project. There is need to capture safety and health of workers involved in the project. • A: An OHS policy will be developed.
On Employment	• People who will be displaced by the project should be given opportunities for employment.

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME / ORGANISATION	ORGN / DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
1.	DIANA KAKWEZA	MINISTRY OF TRADE, INDUSTRY & COOPERATIVES	0789923686	dkakweza@mtic.go.ug kakwedia@yahoo.com	
2.	JAMIE SIMPSON	KAYAK THE NILE (U) LTD	0791880322	INFO@KAYAKTHENILE.COM	
3.	OTUKA PETER	NILE RIVER EXPLORERS	0772470314	raft@nilafrica.com	
4.	EGESA DAVID	KAYAK THE NILE	0782947432	davidkayak@hotmail	
5.	KALISMARTA ASHRAF	NALUBALE RAFTING		Will@nalubale.rafting	
6.	OYARA. N. AWUA.	R.D.C - KAYUNGA	0782649143	—	
7.	KAJUBI LAWRENCE	AIR WATER EARTH	0782564[illegible]	mail@awe-engineers.com	
8.	Oyera Ben David	Air Water Earth	0772196035	d.oyera@awe-engineers.com	
9.	Faith Mugerwa	Air Water Earth	0782716542	f.mugerwa@awe-engineers.com	
10.	YIGA JOSEPH F	OSHD/MGLSD	0772423390	yjflavian@yahoo.co.uk	

(10)

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME ORGANISATION	ORGN/DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
11.	NELLIE BAGGYA	UGANDA MANUFACTURERS ASSOCIATION (UMA)	0782-678797	umareginaloffice@gmail.com	
12.	ARIJO JULIUS	MOESPEC.	0752-306100	arijol@yahoo.com	
13.	MAGGA APOLLO	Chairperson LCIII Wakisi s/c	0774983300		
14.	SSEWANYANA KIGANDA	District Business Comm. Dev't Officer	0712887815	Kygandaskam@yahoo.co.uk	
15.	Pamela Tashobya	AWE Sociologist	0772515917	pkwolekia@yahoo.com	
16.	Kaaya Alex Isaac	P.P/Kyabazinga Business Asst.	0772451932		
17.	Natal Natal Murray	DRIVER	0717100862		
18.	NAHOPE RUTH	KAKISI SUBCOUNTY CDO	0752624168	Ruthnahope2@yahoo.com	
19.	NYESONGA MATAKO	LCIII c/m BUGAYANA	0772868343		
20.	MUBIRU ROBERT	Kayunga LG	0772390529	agmuza@yahoo.com	
21.					

(9)

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME ~~ORGANISATION~~	ORGN / DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
22.	KIYIMBA HENRY	C.D.O NAKISI S/C	0782136633	KIAKISI	
23.	SSEKITOLEKO Solomon	UTB Research Officer	0782041223	Ssekimeko Solomon@yahoo.com	
24.	WAISWA FRED	LAND OFFICER/JINJA	0776633331	Weiswafe@yahoo.com	
25.	NAKIRI JAZIRA KYAZZE	ENVIRONMENT OFFICER BUIKWE	0712271728	Njazira@gmail.com	
26.	MARTIN OKUMU	UNCCI HEAD OF COMM. DEPT	0750788100 0752626103	communications@chamberuganda.com	
27.	OJAR N. ALEMA	R.D.C- KAJUNGA	0782649143	—	
28.	OCAMGIU FRANCIS J	UEGCL	0776237749	focamgiu@uegcl.com	
29.	KALISMARTA ASHIRAF	NALUBALE RAFTING	0782638938	Will@nalubalerafting.com	
30.	MOSES KAGGA	KAGGA	0701-272-460	moses.kagga@kaggapartners.com	
31.	ANNE KOMUGISHA	KAGGA & PARTNERS	0712-865036	admin@kaggapartners.com	
32.	SEGANE KENNETH. N.	KAGGA & PARTNERS	0775449840	Ksegane@yahoo.co.uk	

(11)

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME ~~ORGANISATION~~	Org /DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
33.	Leo Mmerewoma	Kamuli - DCDO	0772614540	mmerez@yahoo.com	
34.	Kateeba Godfrey	Kamuli DTPO	0772-496926	gkateeba@yahoo.co.uk	
35.	KIMIU JOHN	KAMULI CAO	0753036190		
36.	KYONDA MOSES	c/p hellen Kyonda	0772 963127 0752 963127	Kyondamoses12@gmail.com	
37.	Ogwal Joseph	SPO/CA UEGCL	0772 605550	joseph.ogwal@uegcl.com	
38.					
39.					
40.					
41.					
42.					
43.					

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME ORGANISATION	DESIGN/ DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
44.	UEGCL	Environment Officer	0776237749	focamjuo@uegcl.co.ug	
45.	UEGCL	Sen. Specialist	0776 240 684	amobimi@uegcl.co.ug	
46.	UEGCL	Socio logist	0712 184026	akwowe@uegcl.co.ug	
47.	OFFICE OF THE PRESIDENT	D - RDC KAMULI	0774 166688	elegamabori@yahoo.com	
48.	UEGCL	Environment Officer	0712696473	fasiimwe@uegcl.co.ug	
49.	Paul Ferguson	Hairy lemon Island	0752 828 338	hairylemonugandaa@gmail.com	
50.	TIBEIHAAN & CO - WAN	C/P LC3 Bududo S/C	0782417260	t'beivan@yahoo.co.uk	
51.	NAKAMYA LYDIA	CDO/ KAYUNGA	0752202117		
52.	Namis Faridah	SCDO Kayunga	0782497257	namisf@gmail.com	
53.	Duma Geoffrey	DP/Planner Kayunga	077-666-013	dumageoffrey100@yahoo.com	
54.					

12

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME ~~ORGANISATION~~	ORGN DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
77.	Walusimbi Andrew	Bududa S/ County	0772436971		
78.	Miranda Grace	DE - Kamuli	0782579188		
79.	Isabirye Robert	SEO - Kamuli	0772361135	alupar@yahoo.co	
80.	Herbert Owile	ES-REA	0772620444	howle@rea.or.ug	
81.	TAMUBOLA OLIVIA	CDO - JINJA	UTB054399	oliviatambula@yahoo.com	
82.					
83.					
84.					
85.					
86.					
87.					

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

ISIMBA HYDROPOWER PROJECT - STAKEHOLDER WORKSHOP ON THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

By

FICHTNER GMBH & CO.KG / NORPLAN / KAGGA / AWE / AES

Date: 13 December 2012

Venue: CRESTED CRANE HOTEL, JINJA

ATTENDANCE LIST

NO.	NAME ORGANISATION	ORGN/DESIGNATION	TELEPHONE CONTACT	EMAIL ADDRESS	SIGNATURE
88.	Ogwal P. W	Auxiliary foundation	0772309863	ogwalpaully@yahoo.co.uk	
89.	Will Clark	Nalubale Rafting	0782623938	will@nalubalerafting.com	
90.	BASALIZA. ABIGAIL	Environment Officer - Kayunga	0777-425372	degaal@gmail.com	
91.					
92.					
93.					
94.					
95.					
96.					
97.					
98.					

Meeting 2: Isimba Hydro Power Project: Kayunga District Administration held on14th/Dec/2012

Purpose of meeting:	ESIA consultations to obtain views on the proposed project.
Date held & place:	14th Dec 2012. Kayunga District offices
Presented by AWE staff:	Eng. Lammeck KAJUBI - Environmental Engineer (Team Leader) Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer Pamela K. TASHOBYA- Sociologist
Issues raised:	
On Affected Homesteads	• Q: Which are the actual homesteads to be affected by the project? How soon will valuation data of affected PAPs be given to district officials in charge? • A: All information is documented in the valuation report •
On Compensation	• Q: Most government projects get problems during the compensation stage especially if given in installments. Will compensation be done in installments? • A: There will be no installments paid to PAPs, all PAPs will be give a lumpsum of their money. • Q: Is —good willll of an economic facility compensated? • A: • Q: Are squatters on the affected land compensated? • A: Squatters will only be compensated for perennial crops. • Q: If compensating for perennial crop such as coffee, how many years will be factored in compensation? • Q: Does government compensate before project starts? • A: Compensation comes before construction of the dam. • There is need to provide fair compensation to the PAPs
On Roads	• The proposed project if implemented may damage the already existing roads; therefore effort should be made to maintain all existing access roads or better still improve on them.
On biomass	• Is there a way the MAAIF can link with MEMD to reduce the decay of biomass that would by flooded to generate GHG
On benefits	• Communities within the project area should be supplied with tree seedlings to plant as an environment and social benefit. • The project should construct for the affected communities with community resources such as schools, boreholes and health centers as a way of benefiting from the project.
On Impacts	• Post construction impacts for example noise, vibration, and electric turbine effects need to be addressed.
On Kalagala Offset	• Kalagala Offset management plan (KOMP) exists and since Isimba HPP is part of Kalagala Offset area, It should be integrated in the KOMP

On Power	• First priority should be given to communities that will be affected by the HPP when it comes to supply of hydro power. • About 2-5km from the dam site is found power lines; can they be connected to the dam so as to supply power to communities? • Q: Will the district get electricity from the project? • Q: How *long will Isimba HPP be on grid?*
On project	• The project should involve some local leaders in community engagement because locals may not understand the project very well. • Q: How long will construction of Isimba HPP take?
On Employment	• Q: Will the proposed project consider employment for the locals? • A: Yes, the project will consider causal jobs for the locals and semiskilled labour where possible. • Q: When employing workers for the project, won't the contractors consider academic qualifications and bribes? • A:
On Grievance Mechanism	• In case of any grievances, where will the offices be located? Within the project area or in Kampala?
On Tourism	• Q: Won't the reservoir affect Kalagala offset and Itanda falls? • A: • Q: Won't all tourist attraction be eliminated by the project? • A:
On Flooding	• Back flooding may affect others areas that were not in the plan. How will the project ensure that the same volume of water flows down to downstream communities?

Stakeholder consultation record:

Name of agency/stakeholder/community:	KALUNGA DISTRICT HEAD OFFICE (ADMINISTRATION)			
Purpose of consultation (*tick appropriate box*)	Scoping:		ESIA:	✓
	Sensitisation:		RAP:	✓
	Environmental Audit:		Other (specify):	
Date:	18th Dec - 2012.			
Project name:	ISIMBA HYDRO POWER PROJECT			
Proponent:				

	Name of person/ official met:	Designation	Contact (Tel/email)	Sign/ Initial
1	LUTALO-KAMYA JAMES	Sec Natural Resources Kalungu L.G.S Butamira	0772930620 0755310973	
2	SETTI MARINA	Chairperson production, Technical services	0772978514	
3	[illegible]	Principal Technical [illegible]	0773349898	
4	Mutonyi [illegible]	District Councillor	0754604532	
5	Muwanga Kisekka	" "	077621357	
6	KARA GODFREY M	DISTRICT COUNCILLOR (NAKIRO S/C)	0752582738	
7	OYAA-N-ALOUA	R-D-C	0782691143	
8	SIMBWA RAMADHAN	INSPECTOR OF SCHOOLS	0772544668	
9	YIGA CHARLES	DISTRICT FINANCE OFFICER	0772931626	
10	Lukanda Paul Rogers	District Internal Auditor	0774021617	
11	ANI CHAMPLAIN	S.I.S	0752934281	

Stakeholder consultation record:

Name of agency/stakeholder/community:	KAYUNGA DISTRICT HEAD OFFICE (ADMINISTRATION)					
Purpose of consultation (*tick appropriate box*):	Scoping:	☐		ESIA:	☑	
	Sensitisation:	☐		RAP:	☑	
	Environmental Audit:	☐		Other (specify):		
Date: 13th Dec - 2012						
Project name: Isimba Hydro Power Project						
Proponent:						
Name of person/ official met:	Designation		Contact (Tel/email)		Sign/ initial	
22 Kagolo Peterson	Subcounty Chief Busaana		0772304443 petersonkagolo2009@yahoo.com			
23 Nyonchar Geoffrey	for Ag/county Nazigo		0772844772			
24 Kinene A. Kelly	Kayunga		0782 871861			
25 WESONGA MATHIO	LC III C/M KUSITHOMA		0772868343			
26 SSEBAGGALA HENRY M	Assistant CAO		0782089639 dsplust@gmail.com			
27 MABONGA GODFREY	CLERK TO THE COUNCIL		0772601233 / 0701			
28 Joseph Ouma	DWEO		0772-886992			
29 Kigongo David	Jobs TV / Press		0784108426 / 0702690059			
30 [illegible]	[illegible]		0772-668712			
31 [illegible] Rose	[illegible]		0776953817			

Name of agency/stakeholder/community:	KAMWOKYA DISTRICT HEAD OFFICE (ADMINISTRATION)				
Purpose of consultation (tick appropriate box)	Scoping:			ESIA:	✓
	Sensitisation:			RAP:	✓
	Environmental Audit:			Other (specify):	
Date:	12th Dec - 2012.				
Project name:	ISIMBA HYDRO POWER PROJECT				
Proponent:					

	Name of person/ official met:	Designation	Contact (Tel/email)	Sign/ initial
✓12	Dr. David Mugabi	District Prod^v Officer	0772/0701 425364 dmugabi8@gmail.com	
13	MASAMBU JOHN	DISO KAMWOKYA	0772615663	
14	Jambo B. Moses	News Reporter Cbs	0772662963	
15	Samuel K Mukasa	District Environment Officer	0772-460513	
16	Ouma Geoffrey	District Physical Planner	0772-666-013.	
17	SSEBUGWAWO DOCKASON	District Hr	0752-311790	
18	Mulumba Nathan	S.A Busana	0772687352	
19	Kagolo Sarah	Asst Engr	0772937168	SC
20	Nyemanya Geoffrey	Sec for Production Control	0772853164	
21	BASALIZA EDIGHU	Environment Officer	0777-425372	

Meeting 3: Isimba Hydro Power Project: Kamuli District Administration held on 30th/October/2012

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	30th October, 2012 at District Headquarters (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
Issues raised:			
On Project:	• Q: What rates will be used to compensate for lost properties and crops? Does the district have standard rates? • A: There are always District rates that are used. Therefore the District should make sure they update the Districts compensation rates before compensation takes place. • Kamuli District has not yet developed district compensation rates and now using Jinja district. Will these rates be considered? • Government should consider construct a road connecting Kamuli to Kayunga district. • Dam offices should be located in Kamuli District. • Stakeholders should work as a team to benefit from the project. • Q: When will the project start?		
On Involvement	• Land Surveyor and valuers must work with a representative from the District and a local leader so as to identify which structures/properties are affected.		
On Compensation	• Will the government compensate PAPs with no land tittles because most of the people in Kamuli District do not own Land titles?		

On Employment	• **Q:** Will the government consider the locals for casual labor during road construction? • **A:** The contractors will hire local labor for casual work. • The district officials should be involved when recruiting locals from the affected areas • The contractor involved in construction of the dam should give first priority to the local people of Kamuli District.

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting at Kamuli District Hq				
Purpose of consultation (*tick appropriate box*):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 30/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MEMD					

Name of person	TITLE Village name	Contact	Sign/ initial
Kateeba Geoffrey	D- CAO - Kamuli DLG.	0772-449426	
Saeed A. Baghoth	DWO, Kamuli DLG	0791606251	
Bamwole Samuel	Ag. District c/person	0752-507710	
ASIIMWE Jackson	RDC - Kamuli	0772895278	
WATEO EPC	Information officer	0712529669	
MUNUGANYI MOHAMMED	for PPO	0751681341	
Mulondo Graco	Ag DE	0772579188	
Banafamu Robert	District Planner	0772624995	
RICHARD MUSENERO	DISTRICT PRODUCTION OFFICER	0772595849.	
GABULA NADIOPE-A.	SEN. FINANCE OFFICER	0772665138	
Isabirye Robert	S. environment officer	0772361135	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting at Kamuli Hq				
Purpose of consultation (*tick appropriate box*):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 30/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	TITLE / Village name	Contact	Sign/ initial
Lee Muwerekwa	KDLG	0772614540	
WEYALE ANDREW	ACAO KDLG	0704783515	
ISANGA JOSEPH	Forester KDLG	0752 553340	
BUJUMBUKO FRED	PHY. PLANNER-KDLG	0752896682	

Meeting 4: Isimba Hydro Power Project: Kayunga District

Purpose of meeting:	To obtain views on the proposed project.
Date held & place:	23rd October, 2012 at Nampanyi trading center
Villages	Nampanyi, Kireku, Nakakandwa
Presented by AWE staff:	Pamela TASHOBYA - Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
Issues raised:	
On floods	The community raised concern that the dam will be constructed and the water floods, what will become of fisher men Who depend on fishing as their source of livelihood? Does the government have any future plans for them? The fishermen will be given transition fee to relocate elsewhere and continue with their work.
On Compensation	Q: The community inquired if the affected PAPs be would be reviewed before compensation? A: Yes. Q: Maize is regarded as a cash crop and it is a source of income for the community. Why doesn't the government compensate for it? A: Government doesn't compensate for annual crops because ample time is given to the farmers to harvest it. Q: The community also wanted to know if the government would compensate the people living on the Islands? A: Yes. Q: The community also inquired if it were mandatory for the project affected persons to open up an account? A: Yes. The community also asked the government to endeavour to compensate on time so that PAPs get ample time to relocate to other localities.
On the project	Q: The community wanted to find out if the community will be allowed to use water when the damn construction starts? A: They will be allowed to use the water but only prohibited around the damn area. The community also cautioned the contractors of the dam, to consider dust pollution towards the communities. Q: The community also inquired if the community should stop cultivating near the river banks? A: People cultivating near the river banks will be notified when they should stop their activities. Q: Will the Islands be taken permanently by the project? A: Yes Q: Will the community benefit directly from the power when the dam is built? A: No, there will be no direct of power from the dam but there is Rural Electrification going on so the communities will be able to get power through that agency.

On bridge	The community inquired if there was a possibility of road connectivity between Kayunga and Kamuli district?
On corporate Social Responsibilities	They also requested the project to get some piped water from River Nile and extend it to the communities.

Stakeholder consultation record:

Name of agency/stakeholder/community:	Communities of Nampanyi LC1, Kireku LC1 and Nakakandwa LC1				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	23rd Oct - 2012				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
KENYI MOSES	KIREKU	0754773195	
Mujunga Joseph	Nampanyi	0752829661	
Baluku Stephen	Nampanyi	0752728994	
Balodhe Robert	KIREKU	0757027755	
Ayesu Moses	Nakakandwa		
Opondo Charles	Nampanyi		
Obote Bruce	Nampanyi		
Zeb William	Nampanyi		
Oduchu John	Nampanyi		
Walekwa Godfrey	Nampanyi		
Ondia - Augustine	Nampanyi	0755825651	

Stakeholder consultation record:

Name of agency/stakeholder/community: Community of Nampanyi, Kireka & Nakatooke					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 23rd / October / 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Wakhahembe Badan	Nakakandwa	Chairman LC1 0754677457	
Babajunda Christher	Nakakandwa	Woman LC1 0752411658	
DWAMUKE STELLA	Nampanyi	Woman LC1 0755831533	
NAILI ZABINA	NAKAKANDWA	C/P. LC II	
AWINYATA LAKELI	NAKAKANDWA	C/- LC II	
Itemba James	Nakakandwa		
NEKESA JULIET	NAMPANYI		
KAGONZI TOPE	NAKAKANDWA		
BABIRYE JESCA	NAMPANYI	Nampanyi	
NAKATU	Nampanyi	Nampanyi	
OKONGO FRANCIS	Nampanyi	0773 477822	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Communities of Nampany, Kireku & Nakakandwa				
Purpose of consultation (*tick appropriate box*):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 23 October 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Dfuonic Alex	Nampany	0750920027	
Mukangira Cheristine	Kireku N	0754543105	
Logro Alex	Kireku	"	
Longa Cleophain	Nakandwa	"	
Ziraba Yahaya	Nampanyi	—	
Wasiwa Mustafa	Nampanyi		
Mejja Samuel	Nakandwa	"	
Tokuddu Marrion	Kireku		
Diko Mega	Kireku		
Enibe Jiju	Kireku		E J
Waraki Lwaska	Kireku		W. L

Stakeholder consultation record:

Name of agency/stakeholder/community: Nampanyi LC I, Kireka LC I, Naikatanda LC I					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 28th Oct 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
BULUMA CHARLES	Nampanyi	0752614135	—
Stephen	Do	0754874350	
SIMBE EMMANUEL	DO	0754312620	
[illegible]		0754314484	
Mbwani Wanyakoo	Nampanyi	0754066966	
SEKOOBA GEORGE	Nampanyi	0752100944	
KIMBE SULAIMAN	NAMPANYI	0752573138	
DAVIDSON MAVIN	NAMPANYI	0751506716	
DRABANGH JOSEPH	N/A - NYI	0754128152 0783615686	
AMISI KAYIGWA	N/A - NYI	0754134513	—
MISILAMA MUGODA	N/A - NYI	—	—

Stakeholder consultation record:

Name of agency/stakeholder/community:	Community of Nampanyi Kitchen &				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:					
Project name:	Isimba Hydropower Project				
Proponent:	23rd October 2012				

Name of person	Village name	Contact	Sign/ initial
[illegible]	Nampanyi	[illegible]	
Samuel Gosiba	Nampanyi	0755353175	
[illegible] Robert	Nampanyi		
Mujumbere Martin	Nampanyi		
Isale Jackson	Nampanyi	0755708767	
[illegible]	Nampanyi		
Epetete Peter	Nampanyi	0754348393	
Bogere Alex	Nampanyi	0758579372	
Okidi Peter	Nampanyi	0753345574	
Kagese Ndaai	Nampanyi	0755440536	
Francis Nyambadde	Nampanyi	0754011350	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nampanyi LC1, Kireku LC1, Nakakandwa LC1				
Purpose of consultation (*tick appropriate box*)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 23 / Oct / 2013					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
KAITANKOKO DANIEL	NAMPANYI	Nampanyi	
WAGWA JOSEPH	Nampanyi	0757007438	
MBIESIRA Ronna	KIREKU	0754356814	
Mbabazi [illegible]	Kireku		
Ongwen moses	Kireku	0752829611	
Tabu JOSEPH	Kireku	0751326213	
MUTEBI ISAAC	KIREKU		
BASALIRWA GRACE	NAMPANYI		
BUNYI SWAIBU	Nampanyi		
CAPLENI TUNDA	Nakakandwa	0759585215	
Okech Sebigumi	Nampanyi	0753-973352	

Stakeholder consultation record

Name of agency/stakeholder/community:	Nampanyi LC1, Kireku LC1, Nakakandwa LC1				
Purpose of consultation (*tick appropriate box*)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 23rd / Oct / 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Kani Kibaba	Nampanyi	0774-477751	
GWOYEGA BAKALI	Nampanyi	0754503267	
KASUSA YUNUSU	Nampanyi	0757067818	
WAMUTU CHARLES	Nampanyi	07	
JUAN MERIDAH	Nakakandwa	Nakakandwa	
KOROSUKU ALEX	Nakakandwa	Nakakandwa	
WOSSA MOSES	Nakandwa	0755385254	
AUMA HELLEN	Nampanyi		
Akumu MARTIN			
TOYA JOSEPH	Nampanyi		
MIDI ROSE	Nampanyi		

Stakeholder consultation record:

Name of agency/stakeholder/community: Nampanyi LC1, Kireku LC1, Nakakandwa LC1					
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 23rd/Oct/2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
NADYODE LOY	Nampanyi	Nampanyi	
SSEMPA MATHIAS	Nampanyi	Nampanyi	
JOZEPHINE AKUMU	Nampanyi	Nampanyi	
KATO GASTUS	Nampanyi	Nampanyi	
WASWA MUGEZI	Nampanyi	0775727235	
OKUMALA GODFREY	Nampanyi	0784405016	
SEBULIBA D	Nampanyi	Nampanyi	
WALAKIRA S	Nampanyi	Nampanyi	
NYANZI KAHIRA	Nampanyi	0775633982	
ADO BAZIBU JAMES	Nampanyi	Nampanyi	
WAGOTI PAUL	KIREKU	0783405563	

Stakeholder consultation record

Name of agency/stakeholder/community: Nampeyi LCI, Kiroka LCI, Nakakondo LCI					
Purpose of consultation (Not appropriate box):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 23rd - Oct - 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Juma Bukenya LCI Vice	Nampeyi	0759055078	

Meeting 2:

Purpose of meeting:	ESIA consultations to obtain views on the proposed project.
Date held & place:	24th October, 2012 at Kiteredde trading center
Villages	Kiteredde & Nakatooke
Presented by AWE staff:	Pamela TASHOBYA Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
Issues raised:	
On Employment	Q: Will the project employ youths who are not educated? A: Yes, able bodied youths will be employed.
On Compensation	Q: The community wanted to know if the government would compensate untitled land. A: Yes. Q: Does the government compensate for immature perennial crops? A: Yes. Q: Does the government compensate for property that is located in more than one area? A: Yes. Q: The community also inquired if the government compensate would for coffee? A: Yes, coffee is compensated for because it is a perennial crop. Q: What is the fate of a PAP who is compensated less money for land compared to how much he bought it? A: There is a grievance committee where this PAP can go to express their dissatisfaction. Q: Is it mandatory for every PAP to open up an account? A: Yes. Q: Will the government consider the PAPs who derive their income from fishing and sand mining? A: They will be given a transitional fee to relocate to other areas where they can find same work. Q: Incase one has precious minerals underneath their land. Will government compensate? A: No. Q: During the meetings, the community members inquired to know who determines the prices for crops that are to be compensated? A: It is the District Land Board for the project affected district that determines those prices.

Stakeholder consultation record:

Name of agency/stakeholder/community: Meeting with Community of Nakatoke and Peter's tribe					
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 24/10/2022					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		

Doc. Doc No. AAEA03

Stakeholder consultation record:

Name of agency/stakeholder/community: Meeting with Community of Nakatoke and Kalandaka villages					
Purpose of consultation (*tick appropriate box*):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 24/ October/ 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Sserunjogi MOSES	Nakatoke	0756 653705	
[illegible]	[illegible]		
Addie Moses	Nakatoke	0782920243	
WABWIRE ROBERT	NAKATOKE		
ISABIRYE [illegible]	NAKATOKE	0772525430	
Semakula [illegible]	NAKATOKE	—	
Byamukama [illegible]	Kalandaka V	0577[illegible]	
Wasula Edward	NAKATOKE		
Otwonu Richard	NAKATOKE	0754[illegible]	
Kabanyana Richard	KITOOKE		
Enzama Godfrey	NAKATOKE	0754252954	

[illegible]

[illegible]

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting with Community of Nakatoke and Kiteredde Villages				
Purpose of consultation (*tick appropriate box*):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	24th December 2012.				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
[illegible]	Nakatoke		[illegible]
ESMA ARMORI	Nakatoke		
[illegible]	KITEREDE		[illegible]
[illegible]	Kiteredde		
KIIZA Joseph	Nakatoke		
[illegible]	[illegible]		
[illegible]	Nakatoke		
Kayaga Rajabu	Kiteredde		
[illegible]	[illegible]		
[illegible]	[illegible]		
ATWA JAMES	NAKATOKE		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting with Community of Nakatoke and Kiteredde Villages				
Purpose of consultation (*tick appropriate box*):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	24/December/2012				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
[illegible]			
[illegible]	Nakatoke		
Kibuuka Michael	Kiteredde	0752411663	
BUKENYA	KITEREDDE		
[illegible]	[illegible]	[illegible]	
Ronald mutebi	KITEREDDE		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
Mukasa Peter	Nakatoke		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting with Community of Nakaloroka and Kiterebbo village				
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date:	24/October/2012.				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		
SSEKOMBE KASSIMU	Nakaloroka	0758 757112	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting with Community of Nakatoke & Kiterede.				
Purpose of consultation (*tick appropriate box*)	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 24/10/2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Nakabuga Musula	Nakatoke		
Namutasa Evelin	Nakatoke		
NAMUKEKWA SOPHIA	NAKATOKE		
Elizabeth Nabwire	Nakatoke		
NGOBI CHARLES. G.	NAKATOKE / KITERERE	0751362308	
OCHOLA ROBERT	Nakatoke	0757528100	
Nsubuga Dixon	KITERERE	0754502099	
Edwing C. Meak	Nakatoke	0756674893	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting with Community of Nakatoke and Kiterede				
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 24/10/2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Mutonda Patrick	Nakatoke	0755710473	
MWKWAYA JOSEPH	KITERADE	0756912309	
WANYENYA JARED	Nakatoke	0756226553	
KABEZA BENJAMIN	NAKATOKA	0757738653	
Kalisuna Wahabi	Kiterede	0787018788	
Kiterede CRECHE	Kiterede		
[illegible]	[illegible]		
[illegible]	KITEREDE		
[illegible]	KITEREDE		
Christine [illegible]	[illegible]		
Mulwana John	Nakatoke	0759611162	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting with Community of Nakatoke and Kiteredde				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	24/10/2012				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
[illegible]	Nakatoke	0753[illegible]	
[illegible]	Kiteredde	[illegible]	
[illegible]	Nakatoke		
TIGA DAVID	NAKATOKE	0753[illegible]	
[illegible]	KITEREDDE		
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	—	
[illegible]	NAKATOKE		
[illegible]	Nakatoke	[illegible]	
[illegible]	NAKATOKE		
[illegible]	Kiteredde	0755016995	

Meeting 3:

Purpose of meeting	ESIA consultations to obtain views on the proposed project
Date held & place:	25th at Budooda Church
Villages	Kiwuba and Budooda
Presented by AWE staff:	Pamela TASHOBYA- Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
Issues raised:	
On Compensation	Q: The community wanted to know whether the government compensate for licensee owners? A: Yes, the licensee owner will be compensated for their crops. Q: They also wanted if the government would compensate for medicinal plants? A: Yes.
On project	Q: The community also wanted to know the fate of fishermen whose source of livelihood is fishing. A: They will be given a transition fee to relocate to another place where they can continue with their jobs. Q: How much land will the flood area affect? A: This will be studied after the surveyors have computed. Q: How many villages will be affected in Kayunga? A: There will be 13 villages to be affected. Q: Why is the dam located in Nampanyi village yet Isimba falls are located elsewhere?

Stakeholder consultation record:

Name of agency/stakeholder/community:	Consultation meeting with community of Kiwuba and Budoda					
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x	
	Sensitisation:	✓		RAP:	x	
	Environmental Audit:			Other (specify):		
Date: 25/07/12						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
1	NSamba Byekwaso	Budoda C/Sec.	0756832994	
2	Bagirana Joseph	Budoda LC1 Chr	0758247715	
3	Dhwala Bogere G.	Budoda	0754831326	Dhwala B G
4	Bisaijza John	Kiwuba		
5	MUSOKE L.	Kiwuba		
6	Kagezi	Kiwuba		
7	KARENGE Y	BUDODA		
8	[illegible]	BUDODA		
9	KADUKOK	BUDODA		
10	BAMEKAY, Bantansi	Budoda		
11	KAMYA BANULI	Budoda	0753991142	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Budooda LCI and Kiwuba LCI Communities					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 25 - Oct - 2012						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ Initial
12	Abdu Ganekire	Budooda		
13	Kiwuba Chief	Budooda	0773524997	
14	DEBO Alex	Kiwuba	0752788916	
15	LUBALE Ronald	Budooda	0754962661	
16	MEJUBE WILLIAM	Budooda	0775751594	
17	Malinga moses	Budaka	0755545174	
18	Kakooza Peter	Kiwuba	0755388688	K. Peter
19	Kimya Benard	Kiwuda	0752276498	
20	Angyu Nigel	Budooda	0770454410	
21	Buyinza Julyes	Budooda	0758360300	
22	Kozalo Elifazi	Budooda		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Consultation meeting with villages of Kiwuba and Budooda					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 25/10/12						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ Initial
23	OBWAME ANTONI	KIWUBA		
24	ONYANGO MANS	KIWUBA		
25	DOH PERUS	BUDOODA		
26	BASULE ARIASA	BUDOOBA		
27	ONEGA - VICENT	C/PERSON Kiwuba	0753469558	
28	MUGANGA RONALD	BUDOOBA	0771459323	
29	BAKAKKI STEPHEN	BUDOODA	0775 051777448	
30	MBETIZA MABINA	KIWUBA	-	
31	MAYINUNA OMBASA	BUDOODA	0757224554	MO
32	Abbo Florence	Kiwuba	-	-
33	Nakabuga Kadija	Kiwuba	-	-

...akeholder consultation record:

Name of agency/stakeholder/community:	Budooda LCI & Kiwuba LCI					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 25-Oct-2017						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
34	Mwani Renard	Kiwuba		Mwani
35	Atefu Jesca	Kiwuba	0778951822	
36	Kagolo Isa	Kiwuba		
37	Kasolo Lasima	Budooda		
38	Baluku Sarah	Budooda		
39	Sande Kalisi	Budooda	0756882994	
40	FATUMA NABIRYE	Budooda		
41	OGEMA GODFREY	BUDOODA	0753058701	
42	OFWONO GODFREY	BUDOODA	0753476445	
43	Tenyagga Jackson	Budooda	-	
44	Ojamba Godfrey	Budooda	0757039975	

Name of agency/stakeholder/community:	Kiwuba LCI & Budooda LCI					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 25/Oct/2017						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
45	Nabwire Rose	Kiwuba	0750 612221	
46	Nantongo Justine	Kiwuba	0753058965	
47	Nangobi Scovia	Kiwuba		
48	Nakyanzi Kamadi	Kiwuba	0755673266	
49	Ndibayisa Rebbecca	Budooda	-	
50	BAKAKI RICHARD	BUDOODA		
51	Namwande Florence	Budooda		
52	Kyomugisha Mary	Kiwuba		
53	Zephania Edward	Budooda		
54				
55				

Minute 4

Purpose of meeting	ESIA consultations to obtain views on the proposed project
Date held & place:	25th October ,2012 at Kasegga trading center
Villages	Kirindi and Kasegga
Presented by AWE staff:	Pamela TASHOBYA- Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
Issues raised	
On Cultural sites	Q: The community wanted to know if the government would compensate for the cultural sites. A: Yes.
On compensation	Q: Will the government compensate for people without land titles? A: Yes. Q: During the consultative meeting the community wanted to know if the government would compensate the people who stay on the Island. A: Yes, even PAPs living on the Islands will be compensated.
On the project	Q: They also inquired to know when the PAPs would be given the deadline to stop cultivating A: PAPs will be notified after they have been compensated. Q: What will be the fate of fishermen who derive their income from fishing? A: They will be given a transition fee to relocate to another place where they can continue with their jobs.
On Power	Q: Why is their continuous load shedding yet there are many dams that have been constructed. A:
On floods	Q:The locals wanted to know if they would be allowed to cultivate near the river banks after the floods have reduced? A: No.

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kasoya LCI and Kiindi LCI Communities				
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 25th – Oct – 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Sabyata Lutaaya	Kiriindi Tower	0795298	
Musamali F.	Kiindi	0757862[illegible]790	
Gumuca Robert	Kiindi	0782209201	
Kimuma Moses	Kiindi	0753299428	
Ochieng Jerom	Kiindi	0782686550	
Odoco Henry	Kiindi		
Kaliisa James	Kiindi	0750176262	
Gumula Ibrahim	Kiindi	0788210626	
Farouk Kaweesa	Kiindi		
Kisakye Byekwaso	Kiindi	0703145818	
Ikoo Henry	Kiindi	0775531141	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kiranji LCI and Kasoga LCI				
Purpose of consultation (*tick appropriate box*):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 25-Oct-2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
NICHOLAS RUTA	Kiranji		
Kaloli MUSEDE	Kasoga		
OSCAR GODFREY	Kasoga		
SCHEDULE			
OWORI STEPHEN	KIRINDI		
Kizza Stephen	Kabaja		
KAMAYA FELICE	KIRINDI	0705 472366	
[illegible]	[illegible]	0783296 68	
KAZIBA MUHAMEN	KIRINDI	0773 74168 00	
MAGRET AWORI	KIRINDI		
JELIFAH NAMATOVU	KIRINDI		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kirindi LC1 and Kasega LC1				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 25-Oct-2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Mawbuya David	Kirindi	0775301337	
Damali Nabugoya	Kirindi	0758425421	
Maruna Nagayya	Kirindi	—	
Nyanzi Lukenze	Kirindi		
ODOYA GODFREY	Kirindi	0757806109	
Kalangizi peter	Kirindi	—	
Mulwana Alex	Kirindi	—	
Kibuli Emmanuel	KSO	0774435634	
ODWORI JAMES	KIRINDI	0752991486	
Ruwoma Asha	Kirindi	0759686767	
Nabuto Molly	Kirindi	—	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kasega LC1 and Kirindi LC1 Communities				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 25-Oct-2012					
Project name: Isimba Hydropower Project					
Proponent:					

	Name of person	Village name	Contact	Sign/ initial
12	Jasiga Bugenge	Kirindi	0754722499	
13	Kigundu	R	0738924670	
14	SERUGO SUDIKI	KIRINDI	0782296452	SERUGO
15	Nabwal Sonyonga	Kirindi	—	
16	Mulyanyama Gracia	Zonal Leader	0782842455	
17	Bwanga mosa	Kirindi	0751599165	
18	Nabuya Cornelia	KASEGA	0775564876	
19	Kawanga Sulaiman	Kirindi	0785034184	
20	Jumba Abasi	Kirindi	0785499450	
21	Kawesa Godfrey	Kirindi	0777222791	
	Ocombo JOHN	-K-	0777213879	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kirindi LC1 and Kasega LC1 Community.					
Purpose of consultation (tick appropriate box)	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 25 - Oct - 2012						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
1	NAMUGIRO ANDREW	Kirindi	0772561905	
2	NAHAYA Gertrude	Kasega	078524.20590	
3	PAULO KASIRYE	KIRINDI	—	
4	Kayimbazi Stephen	Kirindi	0752854091	
5	D. Manuel.	Kirindi		
6	MANGERIMA G. WILSON	Kirindi	0756593910	
7	Mbagira Ramathan			
8	Federiko Mukoda	Kasega		
9	WERE KANANI	KIRINDI	0753793483	
10	Amiya Betty	Kirindi	0712664266	
11	Medical Nana Zafa	Kirind		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kirindi LC1 and Kasega LC1 Community					
Purpose of consultation (tick appropriate box)	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 25- Oct - 2012						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
22	Mcheing Richard	Kirindi	—	
23	Namody JOAN	Kirindi	0785165540	
24	Madina JOSEPH	Kirindi		
25	Nkonoko mubarak	Kirindi	0774-066 130	
26	SSAKEZYWA PAUL	Kirindi		
27	Nyamo JOHN	KIRINDI		
	Asuma Sarome			
	Katulumayo S.			
	Owino			
	Katendi			

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kirindi LCI and Kasega LCI communities				
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 25 – Oct – 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Budala Muwanga	Kasega	0753088821	
Oloka Matayo	Kasega	-	
Lule Ruweka	Kirindi	0772154644	Lule R.
Lule Joseph S.	Kirindi	0781244943/0754[illegible]	
Bbucoli Joseph B.	Kirindi	07580 94016	
Omusugu Christopher	Kasega	075H5H0212	
[illegible]	Kirindi	075356666	
[illegible] Philip	Kasega	0783567969	
Bisoso Samuel	Kasega	-	
Sempala	Kirindi		
Lukuluka [illegible]	Kasega	0752426783	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kiriri LC1 and Kasoga LC1 Communities				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 25- Oct - 2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Onyanga Kaddo	KIRINDI	0775453256	
Kiengo Bonaimi	11	—	
KINONO DENENS	KHEKIRINDI	0772413796	
Kibalama Joseph	Kirindi	0752879882	
Gumbazi Jonathan	Kirindi	0712854093	
Pasko Geoffrey	Kirindi	0754152244	
Babiaye Sarah	Kirindi		
Bwambale James	Kirindi	0703065057	
Abdul Hamidu Kapela	Kirindi Kyakyizinga	0775765752	
Christine Lule	Kirindi	0772415464	
Marabu Tibaago	Kirindi		

Minute 5

Purpose of meeting	ESIA consultations to obtain views on the proposed project
Date held & place:	26th , October, 2012 at Damba TC
Villages	Nakakonge and Damba
Presented by AWE staff:	Pamela TASHOBYA- Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
On Compensation	Q: The locals asked if bibanja holders would be compensated. A: Yes. Q: They also wanted to know whether the government compensates for immature plants. A: Yes. Q: In addition to that, they inquired who determines prices for land? A: The district Land board determines the prices for land and perennial crops. Q: The locals also wanted to know whether land without titles would be compensated. A: Yes. Q: Will the government compensate for earth graves? A: Yes. Q: If the project is affecting a big part of PAPs land and the remaining is insufficient does the government compensate all of it? A: Yes.
On floods	Q: Will the locals be allowed to cultivate near the river banks when the flooding subsides? A: No.

Stakeholder consultation record:

Name of agency/stakeholder/community:	Consultation meeting for v/Mayors of Isimba and Nakaloke				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 26/Oct/2012					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Mukasa Fred	Nakaloke	0777 [illegible] 820	
Bugenyi Ephs	Nakaloke	0752 903785	
Nabukenya [illegible]	Nakaloke	0751315137	
Namuleesa Rose	Nakaloke	0755144333	
Agira Wilberforce	Dambo	-	
Kapere Isaac	Dambo		
N Magayi	Magayi		
Kamungu Khadija	Nakaloke		
Nabende Z	Dambo		
Ahmed Magezi	Dambo		
Mecu Ead	Dambo		

Patrick Tom Kimanuka H
L-Master
ISO 9001:2008

Dambo
Nakaloke
Dambo

079 760 845

Stakeholder consultation record:

Name of agency/stakeholder/community:	Consultation meeting for villages of Nakakanga and Damba					
Purpose of consultation (tick appropriate box):	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 26/Oct/2018						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
1	[illegible]	Nakakanga		
2	Kawooya R.	Nakakanga		Kawooya
3	Akaaga Bridesita	Nakakanga		
4	Namukasa Agnes	Nakakanga		
5	Damulira Mukibi	Damba Cytom LC1	C	DMB
6	Akwate Lemazya	Damba LC1	0774637253[illegible]	
7	Mugema Patrick	Nakakanga		
8	Bwogerwa Emmanuel	Nakakanga		
9	Sowuna Vincent	Nakakanga	0758 [illegible]	
10	Namwesa Betty	Nakakanga	0755144323	
11	Ddungu John	Nakakanga	0751935142	

Stars Doc No AAE/004

Stakeholder consultation record:

Name of agency/stakeholder/community:	Consultation meeting for villages of Nakabango and Dawba					
Purpose of consultation (tick appropriate box)	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 26/ oct /2012						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ initial
12	Otwegwa John	Dawba	—	
13	Nabuya Jane	Dawba	—	
14	Ssegawa Ronald	Dawba	—	
15	Tibuka E.	Nakabango	0755-821454	
16	Nalloda Ben.	Nakabango	—	
17	Kibbere Mercy	Dawba	0757138024	
18	Ibasi Yozefina	Dawba	—	
19	Nanyanza Ib	Dawba	—	
20	Naiga Sofina	Dawba	0785430023	
21	Nakubaga	Nakabango	—	
22	Kagonza. M.	Nakabango	—	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Consultation meeting for villages of Nakakonge and Ebanda					
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	x	
	Sensitisation:	x		**RAP:**	x	
	Environmental Audit:			**Other (specify):**		
Date: 26/Oct/2017						
Project name: Isimba Hydropower Project						
Proponent:						

	Name of person	Village name	Contact	Sign/ Initial
23	Ssebagala Benis	Danda	0754505070	
24	Katumba Edward	Nakakonge		
25	[illegible]	Ebanda	0256707986	
26	[illegible]	Ebanda	0[illegible]	
	Nanyanzi Yowera	Nakakonge	0775-411532	
	Musisi	Nakakonge	0753432222	
	Kaye Fred	Nakakonge	0778686510	
	Musoke Kaya	Nakakonge	0753801820	
	Bwette Musa	Nakakonge	0787345174	Musa
	Makuya Misaki	Nakakonge		
	Kayizzi Ahmed			

Minute 6

Purpose of meeting	ESIA consultations to obtain views on the proposed project
Date held & place	26th , October, 2012 Nsiima Kibati
Villages	Nsiima Kibati and Sporte
Presented by AWE staff:	Pamela TASHOBYA- Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
On Account opening	Q: During the consultative meeting the PAP inquired to know whether a PAP would be required open up another account even when they already own one? A: Incase a PAP has an account they will not be required to open another.
On Project	Q: Will the PAP be allowed to cultivate on land after compensation? A: No.
On Compensation	Q: After the dam has been constructed and the water floods, the fisher men will be affected because they depend on fishing as their source of livelihood. Does the government have any future plans for them? A: The fishermen will be given transition fee to relocate elsewhere and continue with their work. Q: Will the licensee owners be compensated? A: Yes. Q: Will the government compensate the PAPs living on the Islands? A: Yes.
On Employment	Q: Will the project provide some jobs for the locals? A: Yes.

Stakeholder consultation record:

Name of agency/stakeholder/community: Nsima Kibati WCB					
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 27/10/12					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
MAYANJA ABUS	NSima Kibati	Chairman LCB	AMayanja
		0785159783	
MAYONGA SUZAN	NSima Kibati		
NANTUMBWE DOROTHY	NSIMA KIBATI		Nantumbwe
NEKATO			
ESIRAYO			
KULUKUNZA			
OKONONG VICENT	NSIMA KIBATI	0753189158	
Benedicto Nibabe	NSima Kibati		
Bsemugga Mike	NSIMA KIBATI	0775057743	
Sekabanja Lemeka	NSima Kibati	0741566439	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nsiima LCI				
Purpose of consultation *(tick appropriate box)*:	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	7th - 10 - 2022.				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Nakalungo Sarah Lwo	NSIIMA	0750596072	
Tibamwita Donald	–	0777852971	
Mukungu Valentine	Nsiima	0779678153	Mukungu V.
Nangumi Sweti	Nsiima	0775794735	Nangumi
Carita Kayanda	Nsiima	–	C. Kayanda
Adoch Miriam	Nsiima	–	A. Miriam
MICHEAL Mugga	Nsiima		Micheal
Muwonika Suhaili	Nsiima		
K. Genyi Christopher	Nsiima	0751707913	
B. Enoja Godfrey	Nsiima		

Meeting 7:

Purpose of meeting	ESIA consultations to obtain views on the proposed project
Date held & place	27th , October, 2012 Wabirongo
Villages	Wabirongo
Presented by AWE staff:	Pamela TASHOBYA- Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
On Project	Q: Will the locals be allowed to cultivate near the river banks when the flooding subsides? A: No.
On Land	Q: How much land will be affected? A: This will be determined by the surveyors. Q: If project affects land and one remains on an Island will all the land be compensated? A: Yes
On compensation	Q: How is an affected house evaluated? A: It is evaluated by the valuers using the current market prices. Q: Will government compensate for houses that were not initially affected by the project? A: Yes. Q: Will PAPs staying on Islands be compensated? A: Yes. Q: The community wanted to find out who is compensated incase a PAP dies. A: Through the administrator general the next of kin is chosen to represent the rest of the family for compensation.
On Resettlement	Q: Is there a possibility of government resettling a PAP? A: Yes, PAPs are given that option of resettling them

Stakeholder consultation record:

Name of agency/stakeholder/community:	Wabirongo HCS				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	27/10/12				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Kasomia Justine	Wabirongo	0704358169	Kasomia J.
Kaabbo Irene	Wabirongo		Kaabbo I.
Sajiya Kalema	Wabirongo		Kalema S
KIRIBWA JOHN	WABIRONGO	0774092350	
Namwandu Kato	WABIRONGO		
Namulinda mere	wabirongo	0785647798	Namulinda
Nanangagetulido	wabirongo	-	Mulwaye -
Mukasa Anton	"		
Malonga. N	"		Malonga
NAsumba Justine	"		NAsumba
Gonza P	Wabirongo		gonza

Stakeholder consultation record:

Name of agency/stakeholder/community:	Wabirongo LC1				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date:	27/10/12				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
SSERUNJOGI STEVEN	WABIRONGO	0787625392	
Mugyenda Richard	Wabirongo	0772747696	
SSEKUUBA GODFREY	"	0772180064	
BUTUNJO MOSES	"	—	
KASEKE KAMANDA	"	—	
NABIKITENDE RACHEAL	"	0773 686053	
KASULE YAHAYA	"	0775041600	
MUGAGGO RONALD	"	0752347984	
KATO [illegible]	"	0774438360	
Kawuma Muzafa	Wabirongo	0782094826	
LUBEGA WILLIAM	Wabirongo	0775404442	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Wabirongo LC1				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date:	27/10/12				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
CHRISTOPHER KAMYA	WABIRONGO	0785077484	
G.W. MATOVU	WABIRONGO	0779653772	
EDWIN MUBIRU	WABIRONGO	0754983667	
H.B. Kyaddondo	Wabirongo		
Sserubiriga Idi	Wabirongo	0392944218	
Nkuuu Fuse Ronald	"	0774781502	
Lutaaya Jim George	"	0772765482	
Sseasibo Henry	"	0705447190	
Bwanika [illegible]	"	0779363652	
MUTYABA IVAN	"	0750651139	
Ssenkusu Sabiti	"	0777169953	

Meeting 8

Purpose of meeting	ESIA consultations to obtain views on the proposed project
Date held & place	26th , October, 2012 Kitambuza
Villages	Wabirongo, Kigayaza
Presented by AWE staff:	Pamela TASHOBYA- Sociologist Faith MUGERWA - Sociologist Ben David OYEN - Environmental Engineer
On compensation	Q: Does the government compensate for those without land titles? A: Yes. Q: If one plants trees before valuation will they be compensated? A: Yes. Q: How much will the land take from the river bank? A: This will be determined by the surveyors. Q: Does the government compensate for only the affected land? A: Yes. Q: In case the flood area exceeds the land that was surveyed. Will the government compensate for the land affected? A: Yes. Q: Is the kibanja owner compensated? A: Yes. Q: Will the government compensate people who mine sand? A: They will be given a transition fee to relocate to another place where they can with their work. Q: Will the government compensate for cultural sites? A: Yes, cultural sites are compensated for. Q: Why doesn't a PAP determine the prices for their land? A: It is a government policy for the District Land Board of the project affected district to determine prices for land.

...akeholder consultation record:

Name of agency/stakeholder/community:	Kigayaza				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 28/10/12					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
MUZAHA Yolamu	Kigayaza		
Mandeff yakana	Kigayaza		
Wanda Kazakia	Kigayaza		
Washirafiha J.	Kigayaza	0779121971	
Ikukasa Semwiri	Kigayaza	0794	
Kayinga Rose	Kigayaza	0784600760	
[illegible]	[illegible]		
[illegible]	Kigayaza	0759136020	
Nambuya Jane	Kigayaza		
Ikobachi Clement	Kigayaza	0785993525	
Nambafu moses	Kigayaza		

...akeholder consultation record:

Name of agency/stakeholder/community:	Kigayaza				
Purpose of consultation (tick appropriate box)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 28/10/12					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
[illegible]	Kigayaza	0773251226	
Nabwiru Fazali	Kigayaza	0756582250	
Isisakye Topi	Kigayaza	0752315788	
[illegible]	Kigayaza	0773904959	
Nambafu Asuman	Kigayaza		
Lubati Francis	Kigayaza	0775816870	
Kagaya [illegible]	Kigayaza	0783267033	
Bunyefa Wadiriko	Kigayaza		
[illegible]	Kigayaza		
[illegible]	Kigayaza	0773274417	
Kato [illegible]	Kigayaza	0783961551	

.akeholder consultation record:

Name of agency/stakeholder/community:	Kigayaza				
Purpose of consultation (*tick appropriate box*):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 28/10/12					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Omanya Christopher	Kigayaza	0775038225	
Kabyanga James	Nacwayo	0782854019	
Salimu Ibrahim	Lumuli busoga	0772052138	
Tabbule. DAVID	Kigayaza	—	
Kasoja moses	Kigayaza	—	
Semuli. Waswa	Kigayaza	—	
[illegible]	Kitambuza	—	
Nawanga Paul	Kitambuza	—	
Patrick Sunday	Kigayaza	—	
DAVID Gyabuli	Kigayaza	—	
Kungu Gregory	Kigayaza	0787017243	

.akeholder consultation record:

Name of agency/stakeholder/community:	Kitambuza village				
Purpose of consultation (*tick appropriate box*):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 29/10/12					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ Initial
Wamatere John	Kitambuza	0773517553	
Robert Wekesa	Kitambuza	—	R. W.
Wakwenya-Robert	Kitambuza	0758355665	
Sekasi Julius	Kitambuza	—	
Imakijani Issa Ruyo	Kitambuza	0752871243	
Musisi Mustafa	Kitambuza	0774-659470	
Nseleso [illegible]	Kitambuza	—	
MUKWAYA KEBENGWA	KITAMBUZA	0783905705	
[illegible]	KITAMBUZA	0754[illegible]955	
[illegible]	KITAMBUZA	—	

Stakeholder consultation record:

Name of agency/stakeholder/community:		Kitambuza			
Purpose of consultation (tick appropriate box)	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date:	29/10/12				
Project name:	Isimba Hydropower Project				
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Wambeja Godfrey	Kitambuza	0775516136	Wambeja
Mukisa Magidu	Wabirongo		
Peter EBAAH.	Kitambuza	—	EBAAH.
mugaya mutyaba.	Kitambuza	—	mugaya. T
Stephen KABUSI	Kitambuza	—	Kabusi
mabonga WILISON.	Kitambuza	—	mabonga. W.
wamazimbe. S	Kitambuza	—	wamazimbe.
moya ROMANO.	Kitambuza	—	moya
[illegible]	Kitambuza	—	[illegible]
NAMAWA PAUL	Kitambuza	—	NAMAWA. P.
mukoya JEMIMA	KiTambuza	—	mukoya. J

KAMULI DISTRICT

Meeting 1

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	30th October, 2012 at District Headquarters (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Kateeba Godfrey Sased A. Baghoth Bamwole Samuel Asiiimwe Jackson Waako Epic Munwanyi Mohammed Mulondo Grace Banafamu Robert Richard Musenero Gabula Nadiope Isabirye Robert Leo Murerenome Weyale Andrew Isanga Joseph Bijjumboke Fred	Deputy CAO Kamuli District Water officier Ag. District Chair-person RDC- Kamuli Information Officer Principal Personnel Officer Ag. District Engineer District Plannner District Production officer SNR. Finance Officer SNR. Environment Officer Ass. CAO Kamuli Forestry officer Phy. Planner Kamuli	0772 496926 0791 606251 0782 507710 0772 895278 0712 529669 0751 681341 0772 579188 0772 624999 0772 595849 0772 665138 0772 361135 0772 614540 0704 783515 0752 553301 0752 396682
Issues raised:			
On Project:	Kamuli District has not yet developed district compensation rates and is using Jinja district rates. District people should be involved in the recruitment of employers to work at the dam. Government should construct a road connecting Kamuli to Kayunga district. Most land in Kamuli is not titled. Dam offices should be located in Kamuli district. Stakeholders should work as a team to benefit from the project. The contractor should employ the local people. There are plans for a ferry connecting Mbulamiti to Kayunga. Land Surveyor and valuers must work with the Local leaders.		
On Employment	Q: The community inquired if the government consider the locals for casual labor during road construction? A: Yes the contractors will consider the locals when the construction starts.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting at Kamuli District HQ				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 30/10/2017					
Project name: Isimba Hydropower Project					
Proponent: UEGCL					

Name of person	TITLE Village name	Contact	Sign/ initial
Katebe Geoffrey	D- CAO - Kamuli DLG	077-4969-26	
Saeed A. Baghuth	DWO, Kamuli DLG	0791606251	
Ramadhan Samuel	Ag District Chairman	0752507710	
Asiimwe Tracy	RDC - Kamuli	0772895278	
WATSO EPC	Information officer	0772529661	
Mwiganyi Nathaniel	for PPO	0751681341	
Mubanda Cyprio	Ag DE	0772571155	
Banefumu Robert	District Planner	0772624995	
Richard Nsubuga	DISTRICT PROMOTION OFFICER	0772555919	
Grabula Nabaloga A.	SEN. FINANCE OFFICER	0772665138	
Isabirye Robert	S. environment officer	0772361135	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Meeting at Kamuli Hq				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 30/09/2022					
Project name: Isimba Hydropower Project					
Proponent: NEMA					

Name of person	TITLE / Village name	Contact	Sign/ initial
Leo Muwerwa	KDLG	0772614340	
WEYALE ANDREW	ACAO KDLG	0704783515	
ISANGA JOSEPH	FORESTER KDLG	0752 553510	
RUSUMBUKE FRED	PHY-PLANNER-KDLG	0752396682	

Meeting 2

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	24th October, 2012 for villages of Bukyatifu, Buliso and Bugwanga held at Bukyatifu trading center (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Dina Mirembe Isabirye J.B Nakatto Annet Makanga Robert Mukasa Paul Badhimaze George Kityamu Paul	Kisozi Sub-county Chief Parish Chief Namaganda Councillor Women Namaganda Kisozi L.C 3 Men Councillor Namaganda L.C 1 Bubwanga Village L.C 1 Buliso Village	0751 875273 / 0771875273 0782 644436 / 0751 644436 0757 682454 0759 597188 0756 532157 0751 0050490 0750 885858
Issues raised:			
On Compensation	Q: The community also inquired if compensation is done after the project has started? A: No, government compensates the Project Affected Persons before the actual construction starts. Q: They also wanted to know how the government compensates land with disputes. A: The land is surveyed and valued but it is not compensated for until these disputes are resolved. Q: They also asked if government compensate for land without any property. A: Yes. Q: There was concern if trees are compensated the same way. A: They are compensated according to the sizes and maturity		

On the project	Q: The community wanted to know when the surveyors will and the valuers would start their work? A: They are already underway. Q: They also wanted to know where the offices for the contractors would be located. A: UEGCL will decide in this.
On Employment	Q: The community requested that contractors consider the project affected areas for employment.

Stakeholder consultation record:

Name of agency/stakeholder/community:	BULENGISO, BUBWEGE, NAMAGANDA				
Purpose of consultation (tick appropriate box)	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 24/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MEMD					

Name of person	Village name	Contact	Sign/ initial
SALAMUKA PATRICK	RUGWANGA	0774303211	
TUMUSIIME REBECCAH	BUBWEGE	0754627902	
NAMUGU ROSEMARY	NAMAGANDA	0756823757	
NAMULONDO MARY	KISOZI	0754706968	
Nabawoza Iga	BUBWEGE	0759219283	
OGO LUKE	BUBWEE		
WAMSWA AZALIA	Bulemuka	0725778619	
Mpamso Badru	Bukyatafa	0751975030	
MUKIDI ALIYASA	BUKYATAFA	0781637869	
Kiwemoore Mashiki	Bukyatafa	0781590186	
BATOOLE WILLIAMS	Bulemuka		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bukwambi/Lu. Bubuwege Villages (BUKASA				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 24/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
NAKIBYA NAOMI	NAIKGA		
NABIUMA JULIET	KISOZI	0757192867	
BIRIBAWA JERUTH	KISOZI		
LWANGA ERIMIAH	BUBUWEGE	0754155791	
BAHIMOZE	GEGE	0751005010	
WAISWA EMMAN	BUGWANIGA	-	
LUBWAMA HASHAKU	BUGWANIGA	-	
NAJJUMA JULIET	KISOZI	-	
Namulinga Micah	BUNISE	0755071621	
Kabbale JAMES	Bugwanga		
MUKASA PAUL	BUBUWEGE	0756532157	

Stakeholder consultation record:

Name of agency/stakeholder/community:	BUKYATIFU, BUBWEGE VILLAGE (BUKEDEA)				
Purpose of consultation (*tick appropriate box*)	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 24/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
WAISWA JEMES	BUBWEGE	0758926738	WAW
NANDILA SAIDA	BUBWEGE	-	
NABIKYO GRACE	BUKYATIFU	0755266670	
MUTAASA PATRICK PAUL	BUKYATIFU	0751337214	
NUOBI [illegible]	BUKYATIFU	0756532519	
NGOBI MOSES	BUKYATIFU	0751611510	
MBOIZI [illegible]	BUKYATIFU	0752516362	
NANGOBI FLORENCE	BUKYATIFU	0756734152	
MUYAMA JOHN	BUKYATIFU	0756541350	
Lyanda Harriet	Bukyatifu	0754160594	
MUGWERI JOHN	Bukyatifu		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bukasa, Buzimbye, Bubirizi Village				
Purpose of consultation (tick appropriate box):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	26/12/2022				
Project name:	Isimba Hydropower Project				
Proponent:	Ministry of Energy and Mineral Development				

Name of person	Village name	Contact	Sign/ initial
NAKANDE STEPHEN	BUKASA	0751080211	
Kyangwe peter	Buzimbye	0759151768	
Kabi George	Bubirizi	0754323616	
Nawanda Evelyn	Bukasa	0754185379	
Mpiya Sapriano	Buzimbye	0773492775	
Sitanuke Nicholas	Buzimbye		
Nagwa Nuulu Fiyaaba	Bukasa	0759703247	
Faituna Nabirye	Buzibye		Nabirye
Daola Kaguka	Bukasa	0754990665	Kaguka
Namagaya	Bukasa		BBSi
Wooglow Azalea	Buzimbye	0785718699	

Meeting 3

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	24th October, 2012 for villages of Bukasa, Buzimbe and Bubwegwe villages held at Bukasa trading center (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Dina Mirembe Isabiry J.B Nakatto Annet Mukasa Paul Kakandhe Steven Kyangwe Peter Makanga Robert	Kisozi Sub-county Chief Parish Chief Namaganda Councillor Women Namaganda Men Councillor Namaganda L.C 1 Bukasa Village L.C 1 Buzimbe Village Kisozi L.C 3	0751 875273 / 0771875273 0782 644436 / 0751 644436 0757 682454 0756 532157 0751 080211 0759 151768 0759 597188
Issues raised:			
On Compensation	Q: The community wanted to know in case a house and a piece of land on which it is built belong to different people who is who was legible for compensation? A: Compensation for land is given to the land owner and the owner of the house is also compensated for their house. Q: The community also wanted to know how much land would be taken for how much land will be taken for the dam construction. A: This will be determined after the survey exercise Q: Does government compensate for land without any property? A: Yes.		
On the project	Q: Within the project affected area, the community wondered what would become of the fishermen who derive their source of livelihood on fishing A: They will be given a transition fee to relocate elsewhere where they can continue with their work.		
On Employment	Q: They also wanted to know the criterion for employment? A: The local leaders will provide the local labour for the project construction.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bukora, Buzimbye, Bukasa Villages				
Purpose of consultation (*tick appropriate box*):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 24/10/2022					
Project name: Isimba Hydropower Project					
Proponent: Ministry of Energy and Mineral Development					

Name of person	Village name	Contact	Sign/ initial
NAKANDE STEPHEN	BUKASA	0751080211	
Kyangwa peter	Buzimbye	0759151768	
Kabi George	Bukasa	0754723611/8	
Tumusiime Sam	Bukasa	0754185779	
Mpiya Sapriano	Buzimbye	0773492775	
Sitenale Alinaki	Buzimbye		
Nagwa Nuulu Pigank[illegible]	Bukasa	0759703207	
Faitana Nabirye	Buzibye		Nabirye
Dolola Kaguka	Bukasa	0754990665	Kaguka
Namuggya	Bukasa		BRSi
Wokulira Azalia	Buzimbye	0785118699	

Stakeholder consultation record:

Name of agency/stakeholder/community:	BUKWAFITU, BUBWEGE VILLAGE				
Purpose of consultation (*tick appropriate box*)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	20/12/2012				
Project name:	Isimba Hydropower Project				
Proponent:	UEGCL				

Name of person	Village name	Contact	Sign/ initial
MUGOMEKO Christine	Buzimbye	—	M.C.
Okwir Charles	Bubwege	0754 580086	
Isabirye Joshua	Bubwege	0759729406	
Dhikusooka Joseph	Bumbeye	0754038864	
Zaamu - Nagambe	Bumbeye	—	
NAMUWAYA ROBINA	BUZIMBYE	0755 092458	
Mwizibesaho Si	Buzibye	—	
MUKE-MBU AYUBU	BUZIBYE	—	
MUBIRU PAUL	BUKWATIFU	0757412693	
MUGERE HUSSEIN	BUZIBYE	—	
Nimusiima Jisiw	Buzibye	0757345152	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Buzimbye, Bukeso Village (Bukyatifu)				
Purpose of consultation (tick appropriate box)	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	24/10/2017				
Project name:	Isimba Hydropower Project				
Proponent:	NWEM3				

Name of person	Village name	Contact	Sign/ initial
[illegible] Bayiwanze	Buzimbye	0754799111	
Charles Musinda	Buzimbye	—	
Muzale Paul	Buzimbye	-	
Kikendo david	Buzimbye	-	
Ssuuna Vilson	Buzimbye	-	
Munene Rasasi	Buzimbye	0756326287	
Akimu Lubuzanya	Buka Sa	—	
KITENTO JOHN	BUZIMBYE	0759985458	
MWASE DAVID	BUZIMBYE	0751417233	
Freddi MWASE	BUZIMBYE	075-24-72871	
HASSANI KAWOOS	BUKOSO	0757484776	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bizimbiye, Bweera Village				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	24/10/2022				
Project name:	Isimba Hydropower Project				
Proponent:	MEMD				

Name of person	Village name	Contact	Sign/ initial
Banyaki Barbara	Bizimbiye	0758 416430	
Muwenge Joseph	Bizimbiye	0758673542	
Nabirye madina	Bizimbiye		
Abinda Twaibu	Bizimbiye		
Nanuhaja Nabirye	Bizimbiye		
Birike Zuluna	Bizimbiye	0754683939	Birike Zuluna
Kasela Zamu	Bizimbiye	0753991782	
Namukasa Julo	Bukasa		
KAGODHA GGORGE	BUBWEGE	0751565 41	
YUSUFU MUHAGA	BUEMBA	0755641859	
Mulyanya Fred	Bizimbiye		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bwimbye Bukora. Bukwafa Village				
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	X
	Sensitisation:	X		**RAP:**	X
	Environmental Audit:			**Other (specify):**	
Date:	24/11/2017				
Project name:	Isimba Hydropower Project				
Proponent:	MEMD				

Name of person	Village name	Contact	Sign/ Initial
Mbabazi Ayas:	Bwimbye		
Emanuel Tayle	Bwimbye		
Kabuye [illegible]	Bwimbye	0756 614619	
[illegible]	Bwimbye	0756 [illegible]	
Nakandha [illegible]	Kwo: S/c	0757 [illegible]	

Meeting 4

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	25th October, 2012 held at Nabyama village (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Muwakani Bameka Dauda Lugero Patrick	Parish Chief Kisozi L.C 1 Nabyama Village	0752 359753 / 0788 887920 0754 607364 / 0787 991722
Issues raised:			
On Compensation	Q: The community within Kamuli also inquired if the government would compensate for cultural sites A: Yes. Q: They also asked for how much land would be compensated? A: This will be determined by the surveyors. Q: Does government compensate for without property? A: Yes		
On the project	Q: The community also wanted to know other people who are not in the project area? A: The project may not affect other people directly but employment opportunities will be available for the people.		
On Employment	Q: Will there be employment for unskilled labour? A: Yes.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kalambe A, B & Lwanyana Trading Centre				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 2-6/10/2017					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
ATWINE G	Lwanyana T/C	0756894770	
BALIKUDDEMBE HENRY	Lwanyama T/C	0754073247	
NJALA MOSES	Lwanyama Kalambe	0753727672	
KIBWIKA ABUD	" T/C	-	Kibwika
KITONDE MAGIDU	" T/C	0754643934	
GALINSANGA ELISAFANI	" T/C	"	
Mukooba Paul	Lwanyana K A	0753375364	
Kiyandi Swalic	Lwanyana-Kalambe A	0751867336	
ISABIRYE SAMUEL	Lwanyana B	0755029002	
KINOSA ROBAti	LWANYANA	0756382865	KINOSA
Kisuule Grace	Lwanyana K. A.	0750681323	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kalo-Go A. B. Lwangoma Trading Centre				
Purpose of consultation (tick appropriate box)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 26/10/2022					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
Wamsuwa William	Lwangoma Kalerwe A	0752 [illegible]	
Tumwesige Fawuzi	Lwangoma Kalerwe	0751 95[illegible] 370	
Wasswa Luffu Ssebunjo	Lwangoma Kalerwe A	0756 340780	
Kyakwagi Ronald	Lwangoma Kalerwe	0754 [illegible] 363	
Kalyemi Gad	Lwangoma Kalerwe A	0753038514	
Kagwa Esther	Lwangoma T/C	—	Kagwa
Ssenyonga Charles	Lwangoma T/C	0773 294457	
Bwambale Patrick	Lwangoma T/C	0772 [illegible] 194	
Nyakato Rebecca	Lwangoma T/C		Rebecca
Bwiramu Margret	Lwangoma T/C	0750 [illegible] 679	Margret
Mutumba Kusiimi	Lwangoma T/C	0753 [illegible] 26	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kwa-Ka A & B Livangoma Trading Centre				
Purpose of consultation (tick appropriate box)	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 26/10/2018					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
MATEGE JAMES	Livangoma	0772288630	
MUYANJA JOHN	do.	0751535802	
MUZANGA FLORENCE	do.	0757188846	

Stakeholder consultation record:

Name of agency/stakeholder/community:	NABYAMA VILLAGE				
Purpose of consultation (*tick appropriate box*)	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		

Date: 23/10/2017

Project name: Isimba Hydropower Project

Proponent: MEMD

Name of person	Village name	Contact	Sign/ Initial
Tenywa Daniel	Nabyama	0751-760650	
MUWAKA WILBAMUKADDU	Nabyama	0752357753	
NABIRYE ELIZABETH	Nabyama	0754711086	
NDIKUMANI JAMES	Nabiama	0758112396	
BASOGA DAVID	Nabyama	0754605391 0752723873	
Sam Bhiwoma			
John Bawe	Nabyama	0756687255	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabyeama Village				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 25/10/2013					
Project name: Isimba Hydropower Project					
Proponent: Ministry of Energy & Mineral Development					

Name of person	Village name	Contact	Sign/ initial
Lugero Patrick	Nabyeama	0754607364	
Kitumbo Tomas	"	—	—
DR. NALOGO	NABYEAMA	0752551098	
Ikaubo Moses	"	—	
Peter Mutaaya	"		
Mutumba Richard	"	0759729347	
Muwellas patrick	"	—	
Fatuma Wilson	—do—	0759729347	
B M Kyeland	"		
Lubale Peter	Kisozi Nabyeama	—	
Balodha Williams	Kisozi Nabyeama	—	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabyama Village				
Purpose of consultation *(tick appropriate box)*	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	28/10/2021				
Project name:	Isimba Hydropower Project				
Proponent:	UECMD				

Name of person	Village name	Contact	Sign/ Initial
Muyanja Mohamed	Nabyama village	0773351275	
[illegible] Kalima	Nabyama village	0751129735	
Nampala Willy	Nabyama "	0750573419	
Nakalungo Harriet	Nabyama	0754495043	
Nabirye Bibi	Nabyama "	"	Nabirye
Mulondo Falidha	Nabyama "	"	Falida
Nairuba Rose	Nabyama	"	Rose
Nabwayeba Zubaili	Nabyama	"	Nabwayeba
Namulondo Sofia			
Nantongo Violet		0755-550593	
Bayisoma Hussein	Nabyama	"	Bayi

Stakeholder consultation record:

Name of agency/stakeholder/community:	NABYAMA VILLAGE				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	24/10/2012				
Project name:	Isimba Hydropower Project				
Proponent:	MoEMD				

Name of person	Village name	Contact	Sign/ initial
Eng. Lubanga Geoffrey J.	Nabyama	0757759300	
Mr. Ogobi Robert	Nabyama	0758 140 439	
Bwanika Bosco	"	0752460221	
Nakayemba Simi	"	—	
Hajati Zawanga Babirana	"	—	
[illegible]		0753649521761	
Muka Mugwanya	"	0751 20 65 86	
Mukama James	Nabyama L.C.I	0751556408	
Twekeye Emmy	"	0758412434	
Eriot Charles	"	—	
Muckaden	"	—	

Meeting 5

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	25th October, 2012 at Isimba Nabukiddi trading center (Kamuli District).		
Villages	Isimba Nabukiidi		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Muwakani Bameka Dauda Mudidi James Elijah Dhizaala	Parish Chief Kisozi L.C 1 Isimba Nabukiidi Village Secretary	0752 359753 / 0788 887920 0757 328277 0752 211241
Issues raised:			
On Compensation	Q: Owen falls dam and Bujagali were built closer to the falls, why is Isimba dam located very far from the dam? A: Isimba dam will be located in Bugumira and it was approved to be the most appropriated site for the dam. Q: The community wanted to know where the they report their grievances A: There will be a grievance committee where all these cases will be handled Q: They also wanted to know if the contractors would replace their public utility incase of any damage A: Another borehole will be constructed for the community.		
On the project	Q: How does the government compensate for the PAPs whose biggest part of land has been taken and the remaining is too little to have any activity there? A: Government compensates for all the remaining land and the person relocates elsewhere. Q: If one is given 6 months to vacate the land, can a person use that land to grow crops? A: No Q: If land is located at a higher level will it be affected? A: No.		
On Employment	Q: What criterion will used to recruit local labour? A: The contractor will work with the local leaders recruit local labour.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Village Isimba Nabwindi				
Purpose of consultation (*tick appropriate box*)	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date:	28/10/2012				
Project name:	Isimba Hydropower Project				
Proponent:	MoEMD				

Name of person	Village name	Contact	Sign/ Initial
MUDIBO JAMES	ISIMBA	0753288277	
ELIJAH DHIZAALA	ISIMBA	0752-211241	
NGOBI SAMUEL JOHN	ISIMBA	0754-065777	
KYEBAMAKOLANGA JOHN	ISIMBA	0776797072	
Baiga Johnson	ISIMBA	0758713663	
KIMU MUHWEZI	ISIMBA		
MULESA Julius	"		
MWANGA DAVID	-do-	0754-973030	
Nalwadi Sonia	Isimba		
Tenywa Daniel	Isimba	0751-960682	
Mutyaba Tom James	Isimba	0755-889771	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Isimba Hydro				
Purpose of consultation *(tick appropriate box)*:	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date:	23/10/2012				
Project name:	Isimba Hydropower Project				
Proponent:	UEGCL				

Name of person	Village name	Contact	Sign/ Initial
Kamuyimi M.	Isimba	0752554507	
MUZAFA M	Isimba	0756297696	
Nkanji Yusuf	Isimba	0710405667	
Mukaali Kitte	Isimba		
S Kalisanga	Isimba	0754050569	
Magala peter	Isimba		
Bakikitenda	Rented Isimba	0757671458	
Nakaima Ruth	Isimba	0756323159	
Nalwanga Florence	Isimba		
Tumwesigye Shirin	Isimba	0758130305	
Muhoza Joyce	Isimba	0758130305	

Stakeholder consultation record:

Name of agency/stakeholder/community: Isimba Mobilisation					
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date: 25/10/2019					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
KITALE FLORENCE	ISIMBA		K.F
MBOSOLI EDITH	ISIMBA		ME
NAMULIMO LUWAGA	"		Namulimo
BAZINANE MIRIA	"		Miria
NAMUGANZA EDITH	"		Namuga
KAZEMBE MILABU	"		Kalemba
BAMBAZE [illegible]	"		
BABALANDA WILSON	"	0757-224939	
ADLOCIO KITAMBARE	"	0774885306	
MPOZA ADAH	"		
Nyabi Adah	Isimba		Nyabi

Stakeholder consultation record:

Name of agency/stakeholder/community:	Isimba Nabiridi				
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date:	25/10/2017				
Project name:	Isimba Hydropower Project				
Proponent:	MoEMD				

Name of person	Village name	Contact	Sign/ initial
MUKYAALA JENIFER	ISIMBA	0756520444	
NCI Mbabi	Sokoria	0	
Nakanwagi Louisa	Isimba	0750404840	
Nanangwe Hanet	"		
Kyalika Joice	"		
Kituba M. Samuel Bob	-do-	0777 185946	
Lwanga Lawrence	Isimba	0754348626	
ISABIRYE GERALD	ISIMBA	0750146715	
MUKASAKBO GRACE	Isimba		Grace
Baluku Kabiye	do	-	
Jacob Kawuu	Isimba	0752333062	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Isimba Nabeki				
Purpose of consultation (*tick appropriate box*):	**Scoping:**			**ESIA:**	x
	Sensitisation:	x		**RAP:**	x
	Environmental Audit:			**Other (specify):**	
Date:	28/10/2022				
Project name:	Isimba Hydropower Project				
Proponent:	UEGCL				

Name of person	Village name	Contact	Sign/ initial
MBOOWA SAMUEL	NABEKI	0752444585Z	
MWEGA YOKOSANI	ISIMBA	—	—
TEMUWA PAUL	ISIMBA	0753189529	
MPuya Robert	Isimba		MPuya
Nabanja Shamira			
Nuwagira Stella	Isimba	0757865933	
Nansasa Kalisa	Isimba	0754 [illegible]	
Tenywa Sam	Isimba		
ISAIAH [illegible]	ISIMBA	0753264097	
MUSIMC ROBAT	~~Kiyat~~ ISIMBA	0753239784	
Biasuzale John	Isimba		

Meeting 6:

Purpose of meeting:	To obtain their views on the proposed project.		
Villages	Kisege		
Date held & place:	26th October, 2012 at Isimba Nabukiddi trading center (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Mukiidi David Mirembe Dina Wakuya James	Parish Chief Lwanyama Sub-county Chief L.C 1 Kisege Village	0756 623657 0751 875273 0784 621473
Issues raised:			
On Compensation	Q: Does the government compensate for seasonal crops? A: No. Q: The community also wanted to know how much time PAPs are given to relocate A: PAPs will be given a grace period of 3 to 6months. Q: Will the flood areas remain permanently flooded even after the dam construction? A: Yes Q: Does government compensate for a fish pond? A: Yes. Q: Will the government compensate PAPs without land titles? A: Yes. Q: What happens when land is destroyed by floods after compensation has been made? A: This will be addressed by the grievance committee. Q: Does the government compensate for temporary houses? A: Yes. Q: Does government give disturbance allowance for small compensations? A: Yes.		
On the project	Q: When is the project starting? A:		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kisege Villages				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 26/10/2021					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
Nuwmeso	Kisege	—	
mutumbi charles	Kisege	0752216600	
Buwatali George	Kisege	—	
Mugere Kristofa	Kisenge	—	
Christopher Guma	Kisegs	—	
Isabiiya Paul	— do —	0757533774/0785847520	
Wabi Leo	— do —	— —	
Gondwa Posiano	Kisegje	— —	
Ngatha Mafes	Kisegje	— —	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kisege				
Purpose of consultation (tick appropriate box)	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 26/10/2022					
Project name: Isimba Hydropower Project					
Proponent: MEMD					

Name of person	Village name	Contact	Sign/ initial
Mutekanga Jof	Kisoga	0753767518	
Tito Kadunka	Kisegge	0751643633	
NAMPOGO SAMUEL	KISEEGE		
ISABIRYE MOSES	KISEGE	0753855177	
NELSON	WABULUNGU	0756810558	
KABIRIZAKU VINCENT	KISEGE	-	
NAKINTU WINNIE	BUGUNDA	0755157587	
BASOGA DAVID	KISEEGE	0782222818	
Waiswa Lwiiga	"	0756252505 0776252505	
Hasahya Shepherton	KISEGE		
Doreen patulicle	KISEGE	0753449608	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kisege Village.				
Purpose of consultation (*tick appropriate box*):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	26/10/2012				
Project name:	Isimba Hydropower Project				
Proponent:	MEMD				

Name of person	Village name	Contact	Sign/ initial
Mwebaze Peter	Kisege	0754795723	
Mwebaze George	Kisege		
Bamwesigye Godfrey	Kisege		
Mugenyi Fred	Kisege		
Mbabazi James	Kisege		
Muramuzi Julius	Kisege	0751012527	
Rubaire Zachary	Kisege		Kisege resident
Mukose Joel	Kisege		
Tashirye	Kisege		
Nakimbila	Kisege		
Isabirye	Kisege	0755410300	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kisege				
Purpose of consultation (*tick appropriate box*):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date:	26/10/2017				
Project name:	Isimba Hydropower Project				
Proponent:	MoEMD				

Name of person	Village name	Contact	Sign/ initial
MUKENGA ABLES	Kisega	0757168801	
KiBirigo B.	K. Sega	0757642217	
Kalulu Kenen	Kisega	0758464155	
Kiguse moses	Kisega	0779574567	
Balikitenda Latigu	Kisega	0754174663	
MAKOOMA MOSES	Kisega	0758731804	
MADHI SAMUEL	Kisega	0754048525	
MUKASA Livingstone	Kisega	—	
Luomazo samuel	Kisega	—	
MUZOGI OSMAN	Kisega	0755476615	
ROBERT MUGEDE	Kisega	—	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Kisege Village				
Purpose of consultation (*tick appropriate box*):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 26/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
Nagulu Louisa	Kisege	—	Louisa
Byakora Fatuma	Kisege	—	
Nambwanuka Leona	Kisege	—	Nambwanuka
Magoba Fitu	Kisege	—	Magoba
Kawuma Philista	Kisege	0779435154	Kawuma
Bakuliuya Edith	Kisege	—	B. Edith
~~Nalugajemira~~			
Nagaga Janet	Kisega		Nagaga
Nangobi Esakeda	Kisege		Nangobi
Nangobi Tabisa	Kisege		Tabisa
Babirye Juliet	Kisege	—	

Meeting 7:

Purpose of meeting:	To obtain their views on the proposed project.		
Date held & place:	26th October, 2012 at Lwanyama trading center (Kamuli District).		
Villages	Kalembe A and B		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Muyaya John Balinaine Amulan	L.C 1 Kalembe A Village L.C 1 Kalembe B Village	0751 535802 0758 073247
Issues raised:			
Suggestions:	We request the Government to construct a bridge across the dam connecting Kamuli to Kayunga district. Electricity bills should be cut down because there so many dams that are being built on River. Nile.		
On Project:	Q: How many meters of land from the river will be compensated for? A: The amount of land to be compensated for will be determined after the surveying exercise.		
On Compensation	Q: How does government compensate for land? A: Land is compensated differently depending on the size and value of land that is affected. Q: Is it only the areas next to the river that are going to be affected? A: Land to be affected will be determined by the surveyors		
On Employment	Q: Will the government consider the locals for casual labor during dam construction? A: The contractors will hire local labour for casual work.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bugpima Village				
Purpose of consultation (tick appropriate box)	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 26/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEWA					

Name of person	Village name	Contact	Sign/ initial
Mandwa Kalisa	Bugpima	0756018343	
Kafuko Kalisini	"		Kalisini Kafuko
Nyasi Rukundani	"		
Bahati Jumas	"		
Kalulu James	"		Kalulu James
Sakira Tadeo	"		Sakira Tadeo
Nabuti Simon	"		
		0755070224	
Omuto Charles	"	—	
Lubaale Moses	"	—	
Kyesubira Bosco	"	—	Kyesubira

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bupina Kalemba				
Purpose of consultation (*tick appropriate box*)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	26/10/2022				
Project name:	Isimba Hydropower Project				
Proponent:	MoEMD				

Name of person	Village name	Contact	Sign/ Initial
NAMWASE ZAWENA	BUPINA LWANYAMA	0757315951	
NABIRYE REBECCA	BUPINA LWANYAMA		
Hali Mwajuma	Bupina Lwanyama		
Kimbo			
Godfrey	"		
Musonderchista	BUPINA LWANYAMA		
Kande Samuel Bumba	"	0758036298	
Isabirye Josina	"		
KIRYA DIKAID			
Ntala Moses	"	0753927672	
Balidawa Ali	"		Balidawa Ali

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bupina, Kalamba				
Purpose of consultation (*tick appropriate box*):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 26/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MEMD					

Name of person	Village name	Contact	Sign/ initial
ISEBIRYE PAUL	BUPINA Lwamya	0753	
MONICA	Nambeda		
Musibula Muhammad	Bupina	0758345704	
MUSOBYA R.		0754242271	
BALIRANE	PETER		
Mugaya Chairman	Bupina Lwamya	0779537 79	
Maiga ge	Suza		
BAMUTIRE JEROME	BUPINA LWAMAMA	0772 516319	
BASHIRI	WAMBZO	0755436853	
Isidu	WANDERO	0782115826	
GASOLO	RAS UL	0759100886	

Stakeholder consultation record:

Name of agency/stakeholder/community:	BUKYATIFU, BUZWEGE VILLAGE				
Purpose of consultation (tick appropriate box)	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date:	24/11/2012				
Project name:	Isimba Hydropower Project				
Proponent:	UETCL				

Name of person	Village name	Contact	Sign/ initial
MUOCHUDO Christine	Buzimbye	—	M.C.
Okuwe Thomas	Bubuzege	0754 559086	
Isabirye Joshua	Bubuzege	0759729406	
DHIKUSOOKA JOSEPH	BUMBEGE	0752483869	
Zaamu - Nagambe	Bumbeye	—	
NAMUWAYA ROBINA	BUZIMBYE	0755092458	
Mwijukye Sabasi	Buzibye	—	
MUKEMBU AYUBU	BUZIBYE	—	
MUBIRU PAUL	BUKYATIFU	0757413693	
MUGERE HUSSEIN	BUZIBYE	—	
NIWAGABA JOSEW	Buzibye	0757311512	

Meeting 8:

Purpose of meeting:	To obtain their views on the proposed project.		
Villages	Nakatto and Bumegere villages		
Date held & place:	27th October, 2012 at Bumegere trading center (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Wandera Charles Mudhasi Ibrahim Kanyhegezi Yahya	Parish Chief Nankandula L.C 1 Nakatto village L.C 1 Bumegere village	0751 512890 / 0779644264 0781 781511 / 0752 567231 0774 187492 / 0756 699517
Issues raised:			
On Compensation	Q: Will government compensate a person who has 2 different plots of land along the river? A: Yes. Q: Will government compensate for land without titles? A: Yes. Q: What happens to a PAP who is dies before compensation? A: With the help of the administrator general the right person is chosen of half of the family to receive the compensation. Q: Where does a PAP go incase they have grievances? A: There is grievance committee where such cases are handled. Q: How is land compensated for? A: Compensations are based on district compensation rates. Q: Does the government tax the compensation fee? A: No. We request the government to construct for us a bridge connecting Kayunga to Kamuli.		
On the project	Q: Where will the offices for dam construction be located? A: This will be decided when the actual construction starts.		
On Employment	Q: Will there be unskilled labour? A: Yes, both skilled and unskilled labour will be available.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nakatto, Bumegere Villages				
Purpose of consultation (tick appropriate box)	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	27/11/2012				
Project name:	Isimba Hydropower Project				
Proponent:	MEREMD				

Name of person	Village name	Contact	Sign/ Initial
KANYANGEZI TAMARA	BUMEGERE C/man L.C1	077487492/0754699501	Kanyangezi
Muolhosi Ibrahim	Nakatto C/man L.C1	0752567231/0757515111	
KANDERA CHARLES	PARISH CHIEF	0751512890/0776462464	
Mwanda Kitooke	Nakatto	0753969523	Kitooke
Nkwenkwa Yusuf	Bumegere	0754447356	
Melika Owino	Bumegere	0751697039	
DHIA/SOOKA MUINGO	NAKATTO	0757055868	
IRANDA LIVING	NAKATTO		
MAGANDA BALIKOWA	NAKATTO	0781708539	Maganda
KITIMBO BOSCO	NAKATTO	0752616911	Kitimbo
Mrs Nuulu Kayongo	Bumegere	0751630689	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nakaato, Bumeegave				
Purpose of consultation (tick appropriate box)	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 27/10/2012					
Project name: Isimba Hydropower Project					
Proponent: UEGCL					

Name of person	Village name	Contact	Sign/ Initial
Bagutumbirwe Ismail	Bumeegave	0757316521	
Muwonge Moses	Nakaato	0758516209	
Nabinyi Farhida	Nakaato		N. Farhida
Kabi James	NAKAATO	0756874086	
Mukyala Kamphoge	Bumeegave		Mukyala K
Kiiza Samain	Bumeegave	0774646348	Kiiza
BADWEBYE NATHAN	Nakaato		
KAYULE DAVID CYPRIAN	Nakaato	0757058095	
MUFUTA-MOSE	Bumeegave	0753076241	Mufuta
BABINGA PATRICK	NANKANDULOTI	0773371457	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nakaala, Bumeegove				
Purpose of consultation (tick appropriate box)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 27/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
Nakiranda Ruth	Nakaala		Nakiranda R.
Babirye Juliet	Nakaala		Babirye J.
Namulanda Irene	Nakaala		Namulanda I.
Kalya Isaac	Bumeegove		Kalya.
Bikumbirwaho	Bumeegove		B.
NWIGALIRI JOSHUA	NAKAALA		N.J
Scott Robert	Bumeegove		~~SR~~
Namboka Rakel	Bumeegove		~~NR~~
Magonda Rakel	Bumeegove		Magonda-B
Nakaala Ruth	Nakaala		Nakaala R
Peter Lubale	Nakaala		Lubale P.

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabukiidi Bumogo Villages				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 27/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
Bakamba Ngawa	Nakaalo	–	
Kwatamuka Ephraim	Nakalo		
Basoga Yusuf	Nakalo	0773592677	
Kilimbo Yusuf	Nakalo		
Mpasa Dan	Nakalo		
Mpasa Dan	Nakalo		
Kaafa Febiano	Nakaalo	0773966122	
Naab Mare	Nakaalo		
Kasaba Hamza	Nakaalo		
Nakwaka Fatuma	Nakaalo		
Nammeba Christine	Nakaalo		

Meeting 9:

Purpose of meeting:	To obtain their views on the proposed project.		
Villages	Nabukiidi and Buluba		
Date held & place:	27th October, 2012 at Nabukiidi trading center (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact

	Wandera Charles Yairo Peter Kyabanakolanga Majid Mukasa Godfrey	Parish Chief Nankandula L.C 1 Buluba Village L.C 1 Nabukiidi Village Secretary	0751 512890 / 0779644264 0777 029289 / 0757 029289 0775 443576 0775 443576
Issues raised:			
On Project:	Q: How much land will be acquired for the flood area? A: This will be determined after the surveying exercise.		
On Compensation	Q: Does government compensate for land without any property? A: Yes Q: Will banana plantations be compensated for? A: Yes.		
On Employment	Q: Will the government consider the locals for casual labour during road construction? A: Yes, locals will be considered for casual labour.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabuki & Bulu Villages				
Purpose of consultation (tick appropriate box)	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 27/10/2022					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
MUGISA GODFREY	NABUKI 2	0752220444/0775[illegible]	
Kyebumukulanga Moses	Nabuki	0775442576	
Kisiga George William	Bulumba	0774157728	
KIIMBA TIMOTHY	BULUBA	0782397066	
BALIKITENDA Edward	BULUBA	0756025240	
Mbowa Joice	Nabuki 2	0756423427	Mbowa Joice
Nabirye Moses	Nabuki		Nabirye Moses
SUZAN MARIA	BULUBA	0757123773	
Lugunda Patrick	Nabuki		
Nkuuba Peter	Bulubo	—	
ORYONO RICHARD	Nabuki	0778035212	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabwidi & Bulubo villages				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	27/11/2012				
Project name:	Isimba Hydropower Project				
Proponent:	MEMD				

Name of person	Village name	Contact	Sign/ initial
ENOS	Bulubo	0772605001	
BALIDAWA JULIUS	NABWIKIDI	0774177805	
Magida Magezi	Bulubo	0752617336	
KINTU KEREMENT	BULUBO	0555210504	Kintu Kerement
Nabinye Peggy	Bulubo	0753245533	Nabinye
Nakakande Zahara	Nabwikidi	0774358481	
Damuzungu H.	Bulubo		
MUSIRIMU KAPERE	NABWIKIDI		
George Nkikola	Bulubo		George Nkikola
NDIFUNA EFORIE	NABWIKIDI	0757571550	
Kulha Ramadhan	Nabwikidi	0772671510	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabuyindi & Bulubo				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 27/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ Initial
NSigeleeta ERIEzeng	Nabuyindi	0756 788378	NSigeleeta
Mawerere Jillina	Bulangira	0787 705834	
Mpala Kabaka	Bulubo	—	
Zilonda MOZES	Nabuyindi	—	
James Wabi	Bulubo		James Wabi
Wadhanga Isibale	Nabuyindi	—	Wadhanga Isibale
Mukwaba Living	Nabuyindi		Mukwaba living
Bugunga MOSES	Nabuyindi		Bugunga MOSES
Okwir Latija	Nabuyindi		Okwir Latija
Mwaale Nasulu	Nabuyindi	0751770895	
Bulwa Benard	Bulubo		Bulwa

Stakeholder consultation record:

Name of agency/stakeholder/community:	Nabukidi @ Bududa				
Purpose of consultation *(tick appropriate box)*:	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 27/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MEMD					

Name of person	Village name	Contact	Sign/ initial
Khaisira Tom	Nabukidi	-	Khaisira Tom
Sapa John	Nabukidi		Sapa John
Kawuta Ali	Nabukidi	0774581562	Kawuta Ali
Kiraga Isaya	Bukuba	—	
Maaka Sakuy	Bukuba		
Masanja Paul	Nabukidi	—	Masanja
Mpuga Khaisbu	Nabukidi	—	
Tenywa David	Bukuba	—	
Mudobe Baleese	Nabukidi	—	Mudobe Baleese
Mpata Jotali	Bukuba	—	Mpata Jotali
Wagada Joseph	Bukuba	—	Wagada Joseph

Stakeholder consultation record:

Name of agency/stakeholder/community:	Bubuka & Nabweidi				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 27/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					
Name of person	Village name		Contact		Sign/ initial
ISAAC DISEN	Nabweidi		—		
Moses Owiny	Nabweidi				
Olem Sunday	Nabweidi				Olem Sunday
Sunday Henry	Nabweidi				Sunday Henry
Mutebe Grace	Nabweidi				Mutebe Grace
Ibanda Tobin	Nabweidi				Ibanda Tobin
Baligeya Julius	Nabweidi		0782879776		Baligeya Julius
Kuka Basil	Nabweidi		0757662903		
Nalwanga Rebeca	Nabweidi				Nalwanga R.
Mungoma Kose	Nabweidi		0782255330		Mungoma Kose
Kabuba Bruno	Nabweidi				

Meeting 10:

Purpose of meeting:	To obtain their views on the proposed project.		
	Namalumba village		
Date held & place:	28th October, 2012 at Bugumira trading center (Kamuli District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact

	Wandera Charles Mutaasa Grace	Parish Chief Nankandula L.C 1 Namuluba Village	0751 512890 / 0779644264 0783 286106
Issues raised:			
On Project:	Q: How much land from the river will be compensated for? A: This will be determined by the surveyors. Q: When is the program starting? A: Q: Will people be allowed to graze animals near the dam reservoir? A: No.		
On Compensation	Q: Does government compensate for land without tress or house? A: Yes Q: Will sugar cane plantations be compensated for? A: Yes. Q: Will the government require PAPs without bank accounts to open up one? A: Yes. Q: Does the government compensate for licensee owners? A: The land owner will be compensated for his land while the crops will be paid to the licensee.		

Stakeholder consultation record:

Name of agency/stakeholder/community:	NAMALUMBA Village				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 27/10/2017					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
MUTAASA GRACE	Namalumba	0753286106	
Wakeweka Yusuf Musenya	"	0752663876	
Mr. Bikumbi Jackline	"	0755748875	
[illegible]			
Namuyodi	"		
Nangaga			
NABIRYO Sulait	Namalumba	0754212594	
Mobi David	"		
BYAKUIKA JOHN	"		
Wakamea Ali	Namalumba	0751904560	
Wadi[illegible]	Namalumba	0776778156	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Namalumba Village				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 27/10/2017					
Project name: Isimba Hydropower Project					
Proponent:					

Name of person	Village name	Contact	Sign/ initial
KAREVAWA ARAMATHAN	Namalumba	—	—
MWASE YOWERI	NAMALUMBA	0754394301	
WAISWA STEVEN	"	—	—
MAHOOLA [illegible]	NAMALUMBA	0757223000	
NHABASABA TADEO	"	—	—
KUBI SADATI	"	—	—
Mutaasa Nzalambi	"	—	—
ANNET JEAN	"	0751125753	—
LUZIRA [illegible]	NAMALUMBA		
Balaba Rovisa	"		
Ireeza Musenya	"		

JINJA DISTRICT

Purpose of meeting:	To obtain their views on the proposed project.		
Village	: Lumuli A and B villages		
Date held & place:	29th October, 2012 at Lumuli A trading center (Jinja District).		
Present:	Richard Kalyango, Sociologist Ritah Nabaggala, Sociologist (AWE)		
Officials present:	Name	Designation	Contact
	Muganzi Daniel Lwegaime John Nkulabo Richard	Parish Chief Nakakulwe L.C 1 Lumuli A Village L.C 1 Lumuli B Village	0759 535811 / 0782 978092 07834 048965 0759 103672
Issues raised:			
On Project:	Q: The community wanted to know how much land will be taken for the dam and reservoir area. A: This will be determined by the surveyors Q. Is there a possibility of bringing power to this community after Isimba HPP construction? A: Yes.		
On Tourism	Government is building so many dams along River. Nile and its destroying the Tourism industry.		
On Compensation	Q: Will the government compensate for a private school? A: Yes. Q: Does government compensate for land without any property? A: Yes Q: Will water flood up to the trading centres?.		
On Employment	Q: Will there be employment for the locals? A: Yes		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Lumuli A & B				
Purpose of consultation (tick appropriate box)	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date:	29/10/2017				
Project name:	Isimba Hydropower Project				
Proponent:	MoEMD				

Name of person	Village name	Contact	Sign/ initial
LWEGAIMA JOHN	LUMULI - A	0784043965	
TANGWA JAMES	LUMULI A		
Mukadhuka Bao	Lumuli A	0783233604	
Betuela Robert	Lumuli A	0754458398	
BAZIRONERE SEMU	Lumuli LC I	0776052121	
Ngendo Dikas	Lumuli - A		
Kanyakla Moses	Lumuli C		
Kakubiko John Bosco	Lumuli C	0774391411	
Kudidi yekadi	Lumuli A	0758699140	
Lubega Bsoard	Lumuli A	0755576520	
Balenzi Tadeo	Lumuli C		

Stakeholder consultation record:

Name of agency/stakeholder/community:	Lumuli A & B, C				
Purpose of consultation (*tick appropriate box*):	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date:	29/10/2013				
Project name:	Isimba Hydropower Project				
Proponent:	MEMD				

Name of person	Village name	Contact	Sign/ initial
Muzobe Pande Michael	Lumuli A	0778888710	
Walusoma Leo	Lumuli A	0754137111	
Mukasa Moses	Lumuli B	0754709334	
MADDA JOSEPH	Lumuli A	0782708600	
Nyeko Robert	Lumuli C	0755762726	Nyeko
BAZARE BERNARD	Lumuli D	0785[illegible]53	
IBANDA TOFREY	Lumuli A	0751581638	Ibanda
Malibwa Wilson			
DHABARIRE Sarah	Lumuli C	0773856679	Malibwa
MUKOMBO Eugene	LUMULI A	0756409229	Eugene
ISABIRYE YEKO	Lumuli A	0755272018	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Lumuli A & R.C				
Purpose of consultation *(tick appropriate box)*:	**Scoping:**		**ESIA:**	x	
	Sensitisation:	x	**RAP:**	x	
	Environmental Audit:		**Other (specify):**		
Date: 29/10/2022					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ Initial
Mukamba Emmanuel	Lumuli A	0757062466	
WAISWA MOSES	LUMULI A	0784106215	
Bwengo Vincent	Lumuli A	0774702016	
NABIRYE MICHEAL	Lumuli X	0756634324	
TIBUKWA Mzee	Lumuli A	0754798562	
KAGOLO FRANCIS	LUMULI	0773405552	
MBOGO GUIDA	LUMULI	0757756981	
KALUNGI KUSAKI	Lumuli		
BIKABA Simon	Lumuli	0756142646	
BAKALIKWIRA DEO	Lumuli	0750898194	
WAISWA ALI	LUMULI	0775887014	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Lumuli A & B.C				
Purpose of consultation (tick appropriate box):	Scoping:			ESIA:	x
	Sensitisation:	x		RAP:	x
	Environmental Audit:			Other (specify):	
Date: 29/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MoEMD					

Name of person	Village name	Contact	Sign/ initial
DHEDIMULI SHADAI	Lumuli	0773956679	
MUKISA daniel	Lumuli A	0754735012	
MUGABI ROBERT	Lumuli LCII	0779523877	
Muzale Medici	LOLUMULI L.C.A	0779034272	
Erasa Kandeebeyi	Lumuli LCC	0772055119	
Semanja J.	LUMULI L.C.A	0774726382	
BWANGA F	LUMULI A		bwanga
KULABA RICHARD	LUMULI B	0754103672	Kulaba
Sande S	Lumuli		Sande
MWIRU FREDRICK	NABWIGULU PARISH	0750021779	
Lwasamba Gerald	Lumuli B	0754162754	

Stakeholder consultation record:

Name of agency/stakeholder/community:	Lumuli A & B, C				
Purpose of consultation (tick appropriate box):	Scoping:		ESIA:	x	
	Sensitisation:	x	RAP:	x	
	Environmental Audit:		Other (specify):		
Date: 29/10/2012					
Project name: Isimba Hydropower Project					
Proponent: MEMD					

Name of person	Village name	Contact	Sign/ initial
Mukamba Emmanuel	Lumuli A	0757062466	
WAISWA MOSES	LUMULI A	0784106215	
Bwanga Vicent	Lumuli A	0774702016	
TABIRE MICHEAL	Lumuli X	0756669924	
TIBAMANYA Mike	Lumuli A	0754798562	
KATONDO FRANCIS	LUMULI	0773405552	
MBAGO GUDULA	LUMULI	0757756981	
KALUNGI KUSAKI	Lumuli		
BIKABA Simon	Lumuli	0756142646	
BAKALIKWIRA DEO	Lumuli	0758981494	
WAISWA ALI	LUMULI	0775887014	

ANNEX C - PROJECT BROCHURE

English

FICHTNER and NORPLAN in association with KAGGA & PARTNERS and AIR WATER EARTH (AWE) were contracted by MEMD to undertake feasibility studies for the 200 MW Isimba power station to be constructed on the Victoria Nile, downstream of Bujagali Power Station.

The dam will be constructed across River Nile with one part in Kayunga District (Left Bank) and another in Kamuli District (Right Bank). On the left bank part of the dam will be located in Nampanyi Sub-county while on the right bank it will lie in Bugumira and Kisozi Sub-counties in Kamuli District.

The power to be generate by Isimba hydropower Dam will considerably increase the nation's installed capacity of renewable and cheaper to generate energy supply. Without the project, up to 200 MW of electrical supply would be forfeited on the national grid.

The project may affect categories of people below but Government commits to mitigating impacts and ensuring equitable compensation to affected persons before commencing project implementation.

CATEGORY OF PAPS	LEGAL REQUIREMENTS
Landowners	Proof of Title & Purchase Agreements
Minors	Guardianship
Absentee Land-owners	Signed Powers of Attorney
Survivors of Deceased	Letters of Administration
Persons whose residence has to be displaced	Consent to property valuation undertaken by government appointed valuer
Tenants	Consent from Land Owners for Tenants to sell to the project

Ongoing activities:

Social:

- Sensitization and consultation with project communities
- Property surveys
- Identification of Households for relocation, i.e. Physically Displaced Persons (PDPs)
- Identification of Resettlement Sites and Agricultural Land
- Photographing affected persons

Environmental:

- Baseline investigations (air, noise, fauna/ flora),
- Consultations
- Identification of impacts and feasible mitigations.

Property surveys/ valuation:

- Survey of land affected
- Counting crops/ trees affected
- Valuation of property affected
- Photographing affected property

Ministry of Energy & Mineral Development

Isimba Hydro Power Project (Flood Area)

Project Primer

Government commits to ensuring fair compensation to every affected person and seeks your cooperation during these studies.

For further information:

Ms. Meme Kagga
Kagga & Partners LTD.
P.O. Box 6583, Kampala Uganda, Tel: 0312250006

Ministry of Energy & Mineral Development (MEMD)
Amber House, Plot 29/33 Kampala Road.

Consultation with affected persons.

Possible impacts:

1. Land take and loss of crops, trees, structures, cultural resources;
2. Impact on incomes, livelihoods;
3. Jobs (construction and dam maintenance);
4. Impacts on ecosystems and tourism:
    - Mabira Management Area (Kalagala Offset as defined in Sustainable Management Plan) for which, out of total 1000 km^2, reservoir affects about 1.3 km^2 (0.13%) and transmission line effects about 0.76 km^2 (0.08%).
    - Kalagala Offset as defined in the Indemnity Agreement for which, out of total 22 km^2, reservoir affects 1.8 km^2 (8.2%) and transmission line has no effects.
    - Nile Bank Central Reserve for which out of total 6.07 km^2, reservoir affects 0.168 km^2 (2.8%) and transmission line has no effects.
5. Local/ national economic development from increased availability of power;

Resettlement Action Plan (RAP)

RAP activities include:

- Sensitize the communities in the project areas.
- Conduct a baseline survey on socio-economic factors.
- Estimate the cost of land and property compensation.
- Prepare a Compensation/Resettlement Action Plan.

Project implementation will only start after compensation and resettlement is completed.

Teams on the job:

- RAP Team - Public Consultations / Sensitization.
- Survey Team - Demarcation and survey of affected Land.
- Valuation Team - Derives cost of compensation
- Social Team - Social surveys.

Success of the project will depend on the transparency and commitments of key stakeholders:

- Property Owners
- Local Authorities

Compensation principles:

This will be carried out according to :

- Existing laws of Uganda regarding land and property.
- Findings of the land survey and valuation and donor (funding agency) requirements.
- Approved awards by Office of Chief Government Valuer (CGV).
- Compensation for property will ensure replacement value.

Sample Project Affected Property

Luganda

Kampuni eyitibwa **FICHTNER** (eye Germany) ne **NORPLAN** nga zegatiddwako **KAGGA & PARTNERS LTD** zaweebwa Gavumenti ya Uganda omulimu gw'okusoma n'okwetegereza ebikwata ku kuzimba damu e Isimba awaja okwolebwa amasanyalaze ku muga Kiyira (River Nile) nga osusse e Bujagali. Damu yamasanyalaze eno eja kuvaamu 200 MW.

Damu eno eja kuzimbibwa okusala omugga Kiyira nga ekitundu ekimu kili mu gombolola ye Nampanyi mu District ye Kayunga ne kilala kibe mu gombolola ze Bugumira ne Kisozi mu District ye Kamuli.

Amasanyalaze aganakolebwa damu eno gajja kwongela kubungi bwaago mu Uganda gasobozese emiwendo gyaago okuka. Damu weeba tezimbiddwa, Uganda eja kufuliwa 200 MW eza masanyalaze.

Omulimu ogwa pulojekiti eno gujja kukwata ku biti byabantu abawandikibwa wansi, kyoka Gavumenti yeyamye okutereeza ebinaba bisobye no kuyilira abanakosebwa mubwenkanya nga okuzimba kwa damu tekunatandika.

Ebiti byabantu	Ebyetagisibwa mu mateeka
Bananyini mataka	Ekyaapa kyetaka oba endagaano okwagulilwa ebibanja
Bananyini mataka abataliwo	Obukakafu bwobusigile mubuwandiike
Abebibanja	Obukakafu mu buwandiike nti oli wakibanja kuttaka elyo
Bamulekwa	Obuwandiike okuva ewa Administrator General
Abaana abatasseuka myaka 18	Ababalabilila
Abamayumba agaja okumenyebwa	Enzikiliziganya yomuwendo gwebintu ebijokukosebwa pulojekiti ngekolebwa ne timu yababalilizi nabapunta

Ebizimbe

Ebilime ebyenkalakalila

Emilimu ejijja mumaaso:

Ebyembeela za bantu:

- Okusomesa n'okwebuuza ku batuuze mu bitundu omuja okuba pulojekiti
- Okupima etaka ne bintu nga ebizimbe ne ebilime
- Okukakasa amayumba agaja okusengulwa
- Okukakasa ebifo abantu gyebaja okusengulilwa
- Okuba ebifaanani byabantu ne bintu ebinakosebwa pulojekiti

Ebyo'butonde bwensi:

- Ebintu nga bwebili kati (empewo, kelele, ebisolo n'ebilime)
- Okweebuza kubantu ne bitongole ku bikwata kubyobutonde bwensi mu bitundu omunaaba pulojekiti.
- Okufuna ebinakyukamu kubutonde bwensi namagezi agotuteleza ebinaba bikyuseemu.

Okubalilira ebintu awaja okuba pulojekiti eno:

- Okubalilila etaka elinatwalibwa pulojekiti
- Okubalilila ebilime ebyenkalakalila ne miti
- Okubalilila amayumba aganamenyebwa
- Okukuba ebifaanani byabantu ne bintu ebinakosebwa

Ministry of Energy & Mineral Development

Isimba Hydro Power Project (Flood Area)

Project Primer (Luganda version)

Gavumenti yeyamye okulaba nga buli alina kyaafilidwa aliyilitwa mubwenkanya ate mubwangu ddala.

Okufuna ebisingawo, tukilila:

Ms.Meme Kagga
Kagga & Partners LTD.
P.O. Box 6583, Kampala Uganda, Tel: 0312250006

Ministry of Energy & Mineral Development (MEMD)
Amber House, Plot 29/33 Kampala Road.

Okwebuuza ku batuuze mu bitundu.

Enkyukakyuka esuubilwa:

1. Abantu okusengulwa baaleke ebiime, emiti, amayumba ne bw'obuwangwa bwaabwe.
2. Enkyukakyuka mu byenyingiza ne embeera za bantu;
3. Okufuna emiiimu ejokuzimba nokulabilila damu;
4. Enkyukakyuka kubyo bulambuzi:
    - **Mabira Management Area** (Kalagala Offset as defined in Sustainable Management Plan) eno eweza1 000 km² obunene, naye ekiyanja kya Isimba Dam kija kulyaako 1.3 km² (oba 0.13%) ate line yamasanyalaze etwaale 0.76 km² (oba 0.08%).
    - **Kalagala Offset** eno eweza 22 km² kyokka ekiyanja kya Isimba Dam kija kulyaako 1.8 km² (oba 8.2%) .
    - **Nile Bank Central Reserve** eno elina 6.07 km², kyoka ekiyanja kya Isimba Dam kija kutwala ko 0.168 km² (oba 2.8%) .
5. Enkulakulana enaleetwa okweyongela kwa masanyalaze.

Ensengula yabantu:

Ebinakolebwa mulimu:

- Okusomesa n'okwebuuza ku batuuze abe bitundu omunaaba pouojekiti
- Okumanya embeera yabantu nebyenfuna nga bwebili kati nga pulojekiti tenatandika.
- Okubalilila ettaka, amayumba ne bilime.
- Okukola pulani eyokusengula abantu nokubaliyilila.

Polojekiti ejja kutandika nga abantu bonna bamaze okusengulwa nokuyililiwa.

Tiimu ezija okuba kumulimu:

- Tiimu ekola ku kusengula nokuliyililwa abantu
- Tiimu yabapunta
- Tiimu yababalilizi
- Tiimu yabakola ku mbeera yabantu.

Ebinafuga okuliyililwa:

- Amateeka gensi Uganda agakwata kubyetaka.
- Ebinava mu lipoota ya bapunta nabalilizi ba Gavumenti
- Ebinava mu woofiisi yo mubalilizi wa gavumenti omukulu (Chief Government Valuer).

Ebimu ku bintu ebija okukosebwa pulojekiti

Lusoga

Okwebuuza ku batuuze abe bitundu.

Enkyukakyuka esuubilwa:

1. Abantu okusengulwa baaleka ebilime, emiti, amayumba ne bw'obuwangwa bwayibwe.
2. Enkyukakyuka mu byeningiza ne embeera dha bantu;
3. Emilimu ejokuzimba nokulabilila damu;
4. Enkyukakyuka kubyo bulambuzi:
    - **Mabira Management Area:** Akatundu kalala kulukumi (0.13%) kayidha funa amataba okuva mu kiyila.
    - **Kalagala Offset:** ebitundu munana buli lukumi (8.2%) bidha funa amataba okuva mu kiyila.
    - **Nile Bank Central Reserve:** ebitundu bisatu buli lukumi (2.8%) bidha funa amataba okuva mu kiyila.
5. Enkulakulana okuva mu masanalaze agakoyibwa.

Ensengula yabantu:

Ebinakolebwa mulimu:

- Okusomesa n'okwebuuza ku batuuze abe bitundu omujooba polojekiti
- Embeera yabantu nebyenfuna nga bwebili buti.
- Okubalilila eyitaka, amayumba ne bilime.
- Okukola pulani eyokusengula abantu nokuliyililwa.

Polojekiti edha kutandiika nga abantu bamaze okusengulwa nokubayililwa.

Tiimu edhija okuba kumulimu:

- Tiimu ekola ku byokusengula nokuliyililwa
- Tiimu yabapunta
- Tiimu yababalilizi
- Tiimu yabakola ku mbeera yabantu

Ebinafuga okuliyililwa:

- Amateeka gensi Uganda agagema kubyeyitaka.
- Ebiviile mu lipoota dha ba punta nabalilizi ba Gavumenti
- Ebiviile mu woofisi yo mubalilizi wa gavumenti omukulu (Chief Government Valuer).

Ebimu ku bintu ebidha okukosebwa polojekiti

ANNEX D - CULTURAL RESOURCES MANAGEMENT PLAN

This Cultural Resources Management Plan (CRMP) is proposed for the 180 MW Isimba Dam if such resources and or *—chance finds" are* encountered during line construction.

Purpose:

This plan will serve the following purposes:

- Serves as a key tool the contractor can utilize to manage and monitor preservation of resources of cultural heritage significance.
- Provide transparency to stakeholders that commitments made are actually being fulfilled.

This CRMP plan provides:

- Implementation responsibilities,
- Impact management measures to be implemented, •

Verification and monitoring,

- Records and reporting requirements.

Objective of CRMP

Through its contractors, UEGCL seeks to ensure that socio-cultural impacts are minimized as far as possible. Thus the broad objective of this CRMP is to describe approach and procedures to be undertaken by the contractor with regard to protection of cultural resources.

Scope of CRMP

This plan sets out requirements for management of cultural heritage resources during dam construction. The focus of the plan is primarily mitigation during ground breaking activities; more specifically at borrow sites from which gravel would be extracted.

Definition of "Cultural Heritage"

For purposes of this CRMP, cultural heritage includes:

- Archaeological deposits and remains,
- Historical monuments, sites and buildings,
- Historical and culturally significant landscapes,
- Places of worship,
- Cemeteries/ graveyards,
- Places associated with folklore, mythology (and traditions) and the location of historical and cultural festivals, events and rituals.

Commitments

This CRMP is developed based on target areas and commitments below:

	Target area	Commitment
1	Unidentified archaeological features	This CRMP will be implemented to fulfil requirements of the *Historical Monuments Act, 1967.*
2	Early earthworks involving deep excavations (especially at borrow sites)	A specialist archaeologist (watch brief) will be on site during early civil/earth works entailing excavations (the specialist will come from Department responsible for museums and monuments in Ministry of Tourism, Trade and Industry).

Relationship to Other Documents

This plan should be read in conjunction with:

- Contractor's environment and social management plan,
- Project overall ESMP that specified project-wide requirements for environmental and social management, • ESIA report
- Resettlement Action Plan (RAP) that covers the framework and procedures to be followed during land acquisition for construction of the dam.

National and International Regulatory Requirements

This plan is to be executed in compliance with the following laws and regulations:

- Uganda's *The Historical Monuments Act, 1967*. Sub-section 12(1) of this Act requires any portable object discovered in the course of an excavation to be surrendered to the Minister who shall deposit it in the Museum.
- Beyond national laws, funding agencies have policies/ guidelines applicable to cultural heritage. For instance, World Bank Group (WBG) guidance relating to cultural heritage is set in *Operational Policy 4.01 Environmental Assessment* and Operational Note 11.03 for Cultural Property which defines cultural property as *"sites having archaeological, paleontological, historical, religious and unique natural values".* The World Bank guidance relies on careful design and implementation of projects and seeks to ensure that development activities do not damage cultural heritage.

Roles and Responsibilities

Roles and responsibilities in implementing this management plan are:

Role of UEGCL (Safeguards Unit under Directorate of Planning)

- Provision of overall direction for implementation and performance of the plan
- Provision of assurance to UEGCL that the plan is satisfactorily implemented and effective.

Role of Contractor's Environmental Officer

- Communicating contents and requirements of this plan to contractor.
- Workforce sensitization to ensure that all workers are aware of their responsibilities.
- Coordinating inspection and monitoring by an archaeologist from the Department responsible for museums and monuments. (The environmental office should keep in close contact with the archaeologist throughout the dam construction period).
- Implementation of measures recommended by archaeologist for management of any —chance findsll encountered. • Conduct cultural heritage tool box talks to dam construction personnel as advised by the Specialist Archaeologist. • Maintain records (daily log) related to archaeological finds during transmission line construction.

Role of Archaeologist

It is proposed that a specialist archaeologist be contracted (on a non-permanent basis) from the department responsible for museums and monuments in the Ministry of Tourism, Trade and Industry. Roles of the archaeologist will be:

- Archaeological monitoring for all ground disturbing activities.
- Advise/ guide the contractor with respect to halting or moving construction activities if earthworks encounter archaeological features.
- Conducting preliminary assessment of all previously unidentified archaeological features encountered and submission of these to the national museum.
- Provision of advice on the significance and management of unidentified archaeological features encountered.
- Processing/ excavation of any unidentified subsurface archaeological features encountered in accordance with standard procedures recommended by the Department of Museums and Monuments.

- Maintain watching briefs during opening up any new borrow sites or deep excavations at any location during dam construction, with clear procedures for protection and documentation of any ―chance findsll encountered.
- Maintain monitoring records of all unidentified archaeological features encountered.
- Develop set of points to be discussed in ―Tool Boxll sessions to create awareness among dam construction crews on ―chance findsll/ archaeological features. (Note that as part of their sensitization, workers will be required to cease work if they encounter archaeological features and report to Contractor's Environmental Officer who will notify the Resident Engineer).
- Write a post-construction report for UEGCL upon completion of dam construction.

Role of Contractor

The contractor will be required to:

- Heed advice from the specialist archaeologist in respect to halting earthworks/ ground disturbing activities when signs of buried artifacts are encountered.
- Provide cultural heritage tool box talks to dam construction crews as advised by the specialist archaeologist.

Impact Management

During dam construction, measures to avoid damage to previously unidentified subsurface archaeological features will be based on ―watching briefll by an archaeologist, vigilance of the contractor's environmental officer and awareness of construction crews.

The _watching brief' will be the primary element of the management and protection of cultural heritage during dam construction. It will be conducted by an archaeologist from the Ministry of Tourism, Trade and Industry (MTTI). It will consist of passive visual investigation during ground breaking at excavation sites (quarry and borrow sites). Archaeological resources to be monitored and protected by this inspection program include:

- Artifacts and other remains of past historic and prehistoric occupation, •
Unmarked human burials,
- Cultural and natural soil matrix in which artifacts or other remains were deposited and preserved. •
Structural remains e.g. foundations, storage pits, fortifications, etc.

The objective of the ―watching briefll will be:

- To record subsurface archaeological features discovered during earth-moving activities.
- Provide advice to the contractor and UEGCL on significance of subsurface archaeological features discovered.
- Provide advice to the contractor on areas where ground disturbing construction activities may continue or where necessary need to be ―worked aroundll or stopped.

Activities during ―Watching briefll:

- Prior to commencing any construction activities, the contractor will give a brief to the specialist archaeologist about site(s) they plan to excavate.
- The specialist archaeologist will conduct a walkover to identify site's archaeological sensitivity through characteristics such as soil type, topography, etc.
- The specialist archaeologist will witness/ observe site clearance, soil stripping and excavations for presence of subsurface archaeological features.

In the event that an archaeological feature is encountered, the following actions will be executed (*the definition of major, local, minor importance is given in Table A* 4/1 *below*).

- The specialist archaeologist will immediately inform the contractor of presence of a subsurface archaeological feature. The contractor will immediately inform the Resident Engineer.

- Upon halting work, the specialist archaeologist will perform preliminary assessment (archaeological field work evaluation) of the subsurface discovery so as to evaluate its importance, hence develop a strategy to ensure recording and preservation of the encountered feature.
- Results of this preliminary assessment will be communicated to the contractor and Resident Engineer who should inform UEGCL.

For a discovery of ***minor*** importance, construction may be halted for a short period of time (hours) until a preliminary assessment is completed through the following process:

- The specialist archaeologist will direct the Contractor to halt construction •

The specialist archaeologist should record the discovery

- The specialist archaeologist will direct Contractor to resume work
- The discovery will be reported and transported to the national museum

For a discovery of ***local*** or ***major*** importance, disruption to construction activities could be longer and trigger this process:

- The specialist archaeologist will direct contractor to halt and move construction activities.
- The specialist archaeologist will inform the Contractor and contractor's Environmental officer of the significance of the discovery.
- The Contractor will inform the Resident Engineer of construction time likely to be lost. The Resident Engineer will communicate this information to UEGCL.
- If additional archaeologists are necessary to assess this discovery, the specialist archaeologist will communicate this to the Department responsible for museums and monuments in the Ministry of Tourism, Trade and Industry.
- The site will be demarcated, sealed off until the assessment is completed.
- The team of archaeologists will advise both UEGCL and the Ministry of the importance of the discovery and provide recommendation for further investigations and protection measures.

Table: Significance criteria

Minor importance	Small size discoveries such as: an isolated feature of dubious origin geological feature single spot with no other evidence
Local importance	Small to medium size discoveries such as: A group of features A single burial
Major importance	Discoveries such as: A complex settlement site A group of burials

Post-activity Report

This report is prepared by the specialist archaeologist upon completion of ground disturbing activities. This report will be submitted to the Supervising consultant, Contractor, UEGCL and Department responsible for museums and monuments. The report will summarize findings of archaeological monitoring describing any features encountered and their significance.

In addition to all foregoing measures, the following will be implemented throughout the dam construction period:

- Prohibit collection of archaeological artifacts by dam construction crews.
- Avoid undue disturbance to areas outside approved construction areas. •

Limit worker access to construction areas only.

- Limit vehicle access to construction areas only.

Sensitization of Workers

General environmental awareness training will be presented to all dam construction crews and this will incorporate information on cultural heritage, its significance, protection status and the potential for previously unidentified subsurface archaeological

features in the area including construction activities that may destroy them. This awareness will be maintained through tool -box talks that should be regularly conducted with all construction crews. During such talks, the presence and role of specialist archaeologist will be emphasized.

Verification and Monitoring

The principal objective of verification and monitoring is to provide assurance that:

- Dam construction is compliant with procedures in this cultural heritage management plan.
- Evidence is demonstrated that commitments related to cultural heritage protection are being effectively met.

Key Performance Indicators

Key performance indicators (KPI) in this section will be used to monitor cultural heritage management and (Table A7.2). The contractor's Environmental Officer will undertake this monitoring based on proposed KPIs.

Table: Significance criteria

	KPI/ measure	Rationale	Performance target	Monitoring frequency
1	Conduct cultural heritage awareness training	Ensures workers are aware of cultural heritage in the area and the possibility of sub-surface resources to be encountered	90%	Every 3 months
2	Number of complaints received from communities or other third parties regarding damage to cultural heritage	Indicates community response to the project	Zero	Monthly
3	Number of —chance findsll damaged by dam construction activities	Monitors effectiveness of the cultural resources management plan (CRMP)	Zero	Monthly

Action Tracking

All non-compliance with the CRMP should be followed up and corrective action taken. The contractor's environmental officer is expected to maintain an *actions tracking system* as part of archaeological monitoring. Cultural heritage management action tracking including close out of actions (solutions and preventive actions taken) will be reported quarterly by the contractor to UEGCL.

Reporting and Record Keeping

Specialist archaeologist will report the following to the Contractor's Environmental Officer:

- Daily log of activities on a weekly basis.
- Results of any assessments of —chance findsll as soon as the assessments are completed.
- A detailed report of field activities, findings and conclusions following a period of major earthworks (opening borrow sites). This report will then be submitted to UEGCL.

Contractor's Environmental Officer will report the following to the Project Manager who should submit any such information to the Resident Engineer.

- Awareness records on cultural heritage resource among workers on a quarterly basis. •

Quarterly report summarizing cultural heritage management activities.

- Action tracking system on a quarterly basis.
- Performance against key performance indicators.

ANNEX E - CULTURAL RESOURCES BASELINE REPORT

ISIMBA HYDROPOWER PROJECT

CULTURAL HERITAGE SURVEY

APRIL 2013

Prepared by DAVID SEPUYA KALANZI
P.O. Box 5552 KAMPALA
TEL:256-752-657384

Email: davidkal2011@gmail.com

TABLE OF CONTENTS

ACRONYMS

AWE	Air Water Earth Ltd
ESIA	Environmental Social Impact Assessment
BEL	Bujagali Energy Limited
HPP	Hydro Power Project.
IUCN	International Union of Conservation of Nature
GPS	Geographical positioning System

BACKGROUND

In 2012 the Ministry of Energy and Mineral Development Contracted FICHTNER and NORPLAN in association with KAGGA &PARTNERS and AIR WATER EARTH(AWE) to undertake feasibility studies for the 180 MW Isimba Hydropower project to be implemented on the Victoria Nile downstream of the Bujagali Power station.

The Dam will be constructed across River Nile with one part in Kayunga District (left Bank) and the another in Kamuli District On the left bank part of the dam will be located in Nampanyi Sub-county while on the right side it will lie in Bugumira and Kisozi sub-counties in Kamuli District.

The power to be generated by Isimba hydropower Dam will considerably increase the nations installed capacity of renewable energy. This Cultural Heritage Baseline study is a component of the Environment ,Social Impact Assessment(ESIA) conducted by Air Water Earth (AWE)LTD on the project. The study investigates the impact of the project on the Cultural Heritage of the area taking into account the known history of the area.

METHODOLOGY

The study involved a desktop study of the history of the area ,stakeholder consultations at the grass root in Kayunga and Kamuli districts where the project is situated. Lastly the fieldwork in form of transect walks and test pits to undertake archaeological study of the project area . The survey also investigated the presence of historical sites or sacred sites which could be affected by the project.

The Study was conducted by David Kalanzi a Cultural Heritage Consultant with the assistance of Herman Muwonge of the History Department of Makerere University who undertook the analysis of artifacts recovered in the archaeological field work.

HISTORY OF PROJECT AREA

The project area was like the rest of Uganda first inhabited by hunter gatherer people related to the Ndorobo of Mt Elgon area or the Bambuti of Bundibugyo district. These people have been in the area since Paleolithic period over one million years ago.

The Bantu people who arrived in the great lakes region around 1000B.C found the hunter gatherers in the area. The Bantu owing to their superior technology of using metal, superior social organization of building village communities and practicing agriculture soon took control of the land the hunter gatherers were submerged in various bantu communities .The Baganda called the short hunter gatherers —Banakalangall.

After 1000A.D the project area like the rest of southern Uganda became part of the historic Bunyoro Kitara kingdom. This historic Kingdom was first ruled by the Batembuzi, then the Bachwezi. At the breakup of the Bunyoro -Kitara chwezi kingdom ,the west bank of the Nile became Buganda Kingdom and the east bank became Busoga composed of fourteen hereditary chiefdoms whose rulers had been appointed by the omukama of Bunyoro.

Traditionally therefore the area along the river nile was occupied on the east bank by the Basoga tribe and on the west bank by the Baganda tribe , the language, culture and beliefs of the two tribes have many similarities. Before 1900, the east bank area was densely populated but in the second half of the 19th century the population decreased due to a sleeping sickness epidemic. The west bank was also affected though less severely.

The British colonial administration set up measures to combat the sleeping sickness by eradicating the disease vector which was identified as the Mbwa fly in the area. The east bank was repopulated during the 1940s and there was extensive settlement and clearance of forest land. On the west bank settlement took place during the 1950s following forest clearance after the mbwa fly was eradicated in 1952. Settlers came from all over Uganda as well as other East African countries. As a result both banks have the most heterogeneous population in the whole of Uganda.

The socio-economic surveys of the area at the start of the Bujagali dam project revealed some 22 different ethnic groups in the project area, illustrating the heterogeneous nature of the population. The Basoga are by far the largest and comprise 46% of the total. They are dominant on both banks comprising 36% of the respondets on the west bank and 54% on the east bank. The Baganda comprise 17% of the total population and are more prevalent on the west bank where they comprise 22% of the

affected population. The other main ethnic groups are the Basamya, Teso, Banyole, Bagwere, Bagisu and Badama. Lugbara, Kakwa, Madi and Sudanese refugees.

ARCHAEOLOGICAL STUDY

The main objective of this exercise was to determine if Isimba Hydropower project presented any threat to the archaeological resource in the direct impact zone. The survey was conducted in the area of the Dam construction at Nampanyi and in the inundation area on both sides of the river. as well as the Islands in the river.

A surface / reconnaissance survey was under taken along both banks of the river to locate archaeological features and sites likely to contain archaeological material. Locations that point to concentration of human activity such as ash heaps pottery scatter or mounds soil are indicators of presence of archaeological material . Where potsherds were found, the spot was immediately recorded and entered in a GPS and photographs taken of the recovered material. The surface survey has collected over forty potsherds which were diagnostic.(with patterns)

GPS locations where artefacts were found

1	Location1	36N0503614	UTM 0083132
2	Location2	36N0504158	UTM 0038138
3	Kyambade Island	36N0504953	UTM 0085335
4	Location4	36N0506184	UTM 0076173
5	Location 5	36N0505155	UTM 0073015
6	Location 6	36N0505654	UTM 0068456
7	Location 7	36N0505500	UTM 0085500
8	Location 8	36N0505766	UTM 0082991
9	Location 9	36N0507181	UTM 0077133

The different patterns of the potsherds showed that the area has been settled by humans in village communities from as early as the early iron age around 500 B.C.

The potsherds also show that the area has been settled by different ethnic groups in the twentieth century as various ethnicities decorated their pottery in unique styles. This is consistent with the heterogeneous character of the human population of the project area. The test pits did not yield any archaeological finds.

The potsherds recovered fitted in the general pattern of archaeological samples got from the surveys done in the area of the Bujagali Dam upstream and those in the records of ceramics of the east African great lakes region. The consultants are of the view that there is already a good representative sample of the archaeological resource of the area of the proposed Isimba hydropower project at the Uganda Museum collection of Uganda pot shards .

HISTORICAL AND CULTURAL SITES.

There are two historical sites in the vicinity of the project area both at the Kalagala Offset defined in the indemnity agreement for the construction of the Bujagali Dam between the World bank and Uganda government.

On the eastern side of the river Nile at Kalagala is Itanda falls, a site in Busoga mythology where Walumbe (death god) descended into the earth to escape from Kayikuzi who had come to remove him from the earth for killing humans .Worship of the spirit lubaale Musoke and the Itanda spirit take place at a shrine on the river bank at Itanda . A cultural center is planned to be constructed on the east bank at this place managed by Busoga Kingdom.

On the Western side is Kalagala, a site sacred to Buganda Kingdom being attributed to Kabaka Nakibinge who reigned around 1500A.D. Cultural ceremonies are undertaken by every Kabaka at the site and the place has trees planted by the Kabakas who undertake ceremonies at the site. Buganda kingdom designated the Empindi clan as the overseer of the cultural site.

These two sites are in the protected area of the Kalagala offset and will not be impacted upon by the project. At the time of writing this report (April 2013) the government of Uganda was initiating the Kalagala -Itanda sustainable management plan to develop eco-tourism in the area.

TRADITIONAL RELIGION SACRED SITES

a) Nampanyi

The Nile river is associated with a number of spirits and river gods at various spots. The Survey was able to locate three places on the west bank of the nile where worship activities of traditional religion take place. One location is Nampanyi where a medicine man of the Japadhola tribe called Majanga Joseph operates. He claims to have a spirit called —Burall which he came with .As the spirit moved with his family to come to Kayunga ,he accepted that it can relocate and he will have to relocate that spirit. The coordinates are: 36N 0504483;
Utm 0085203.

a) Kirindi

The next sacred sport with a permanent shrine and attendant is the spirit Nakwaya and Kirindi site on the nile. This site has built shrines and is recognized as a place of traditional religion by the locals. It attended to by a priestess called Madina Nalongo Nabirye . The survey team found her with a young trainee girl she is preparing in the priestly duties as the .The priestess as accepted the fact that the water resouvouir will inundate her place of worship and is seeking to relocate to a spot up from the original place but near the river as she say that she serves a water spirit. This spirit is owned by members of the Nvuma clam in Bugerere. The coordinates of this shrine are: 36N 0506254,utm 0075513

b) Budoda

The third place was at Budooda on the river bank .The place is located in a living tree which is hollow and has two men named as Sekajja and Masaba who are the priests of the Budoda spirit. It is reported that worship activities take place at night and people are cleansed of their misfortunes by these priests. Sacrifices are also offered to the spirit Budoda here. The coordinates of this are: 36N 0505606,utm,0079332.

d) Nababirye Spirit

On the East bank the first sacred site from the Dam going upstream where traditional worship activities take place is in Nababirye village . A shrine is located at 36N0505766utm 0082991.

This site has the Spirit called Nababirye. The attendant of the Shrine is Ms Farida Namulondo Nairuba Tel :0755862101. This lady priest belongs to the royal Baisengobi clan of Bugabula area in Kamuli District. The priestess stated that as the medium of the Nababirye spirit , She is the one who officiates at the burial of Nadiopes who are the hereditary rulers of Kamuli district in Busoga. She also officiates at the burials of the following Spirit mediums: Ingo, Bujagali and Wanyana of Mbulamuti.

The priestess lives in Kisozi Village at the following coordinates. 36N0507805,utm0085653. The priestess accepted that the Spirit would have to relocate after ceremonies were conducted. But being from the royal clan of Bugabula of Kamuli,she was against any involvement of Busoga Kingdom in the relocation exercise as she informed the consultant that Bugabula prince Gabula Nadiope had been cheated of the Kyabazingaship after the death of the previous Kyabazinga Muloki.
Nakyaaka Spirit.

e) Isimba village -Spirit of Baise Muwaya clan

At Isimba on the eastearn side of the nile ,the Baise muwaya clan have shrines at a location 36N0506213,
Utm 0080769. This shrine is comprised of a bee hive attended by mr.Tofa Kyabanakolanga of Tel 0757797072 and nearby at another location 36N0506297,utm 0080669, a brother Mr,Mulesa Ben of Tel 0753156303 attends to another set of shrines all belonging to the Enkuni (spirit) of the Baise Muwaya clan of Busoga. The shrine caters mainly to the members of the Clan but had of recent been receiving other people who would be brought by members of the clan for traditional worship. These shrines are overlooking low lying land which will be inundated and were demarcated as belonging to the forecasted area to be flooded as a result of the project.

f) Nankandulo village

At Nankandulo village, Buluba zone on the east bank , the second public shrine from the dam site going upstream Is located at the following coordinates :36N 0506625,utm0077133. On the river nile. Shrines of the Spirit Nakyaaka are located in the land of Mr.Mudali Edrisa who also serves as the priest of the spirit. Mr.Mudali informed the consultant that he was possessed by the spirit at 18 years of age up to the time of the interview (April 2013)where he appeared to be in his middle fifties. He states that he solves problems of people using the powers of Nakyaaka.

g) Nankndulo-Nabukidi Zone

Kiduuma Spirit and Nakasaga Spirit.

The priest of Nakyaaka has a daughter who is the attendant of the above two spirits .Her name is Madina Nakibogo of tel : 0773714619 . Her shrines are located at nankandulo village in Nabukidi Zone. The priestess had travelled to Iganga in her duties at the time of the visit.

h) Nankandulo Island

Mukasa and Nakyaaka Spirit Shrine in the River nile.

Nankandulo Island in the river nile at the coordinates:36N0506358,utm 0076236 hosts the shrines of Mukasa a Lubaale of Buganda and Nakyaaka a local diety.

The attendant of this shrine is a retired army officer Lt. Mudduawulira. Of Nankandulo Buluba Zone.
Tel: 0772470831,0755148438. This traditional priest conducts people with problems to the island where they pray to the two spirits to solve their problems in life. The priest accepted that the shrine would move after relocation ceremonies.

The information on the location of the sacred sites was provided by Mr Godfrey Wafula tel :0757316977 who had participated in the survey of the project affected zone in 2012 which had marked all areas to be inundated by the rising water as a result of the project.

IMPACT OF THE PROJECT ON CULTURAL HERITAGE OF THE AREA

The project will impact on the cultural heritage of the area at the household and at community level.
At the household level ,the cultural property to be impacted are the graves of households in the area to be inundated. These will have to be relocated along with the homesteads .This will be handled by the Resettlement Action Plan (RAP) of the project area where compensation rates will be determined with the district officials as per the laws of Uganda.

At the community level, the sacred sites where traditional worship activities take place will have to be moved away from the area. Relocation ceremonies have to be conducted at the eight locations mentioned to move the spirits from the places affected by the implementation of the project. From the lessons learnt as a result of the Bujagali Hydropower project, the relocation exercise has to involve the spirit attendants as well as the traditional community owners of the spirits who the priest attendants know. For example the Head of the Baise Muwaya clan for the shrine at Isimba , the Nvuma Clan for the Nakakwaya spirit at Kirindi(west bank) and the head of the Baise Ngobi of Bugabula County for the Nababirye spirit (east bank).

CONCLUSION

Isimba Hydroelectric Power project is located in an area with cultural heritage resources. However these resources cannot obstruct the project as avenues of handling cultural property have been developed in Uganda.
This is in the form of relocation exercises for both the graves at household level and spirits at the community levels.

As regards archaeological resources, a procedure for handling chance finds will have to be developed by the project implementer to come into effect in the case of significant archaeological discoveries during the dam construction phase.

REFERENCES

1.Archaeological Impact Assessment of the Proposed Bujagali Hydropower Site and inundation Area Uganda. By D.Kiyaga-Mulindwa and E.Kamuhangire. 2006. Bujagali Energy Limted(BEL)
2.D,Kiyaga-Mulindwa,2002, Archaeological Impact Assessment of the Proposed Bujagali Hydropower Station,AES Nile power.

3. D.Kiyaga-Mulindwa,2004,ǁThe Archaeology of the Riverine Environment of the Upper Nile Valley Ugandaǁ Studies in the African past 4,pp38-56.

4. R.D Ladkin and A.B Raper,1948,ǁThe Banakalanga of Kyagweǁ
Uganda Journal ,15pp 144-58

5.Traditional religion and Clans among the Basoga.
By Richard Kayaga Gonza ,Cultural Research Centre Jinja,2002.

6. What does Obuwangwa mean in Busoga? An aspect of Ethnonationalism in Uganda.
Research by Nobuhiro Nakabayashi, Toin University of Yokohama Japan,2008.

7.Kintu. by Cultural research centre jinja,1998.

8.The Kalagala -Itanda Eco-Tourism Development plan 2010-2019 by IUCN for Ministry of Tourism Trade and Industry 2009.

9.David Kalanzi, 2010, Bujagali Hydroelectric Power project ,Updated Cultural Property Management Plan for Ministry of Energy and Mineral Development.

10.RC Soper 1971, Early Iron Age Pottery from East Africa :Comparative Analysis,Azania VI ,pp39-52.

APPENDIX A
TRADITIONAL RELIGION PRIESTS AND SACRED SITES

The priestess of Nakakwaya spirit at Kirindi with her assistant.

The priestess of Nakakwaya spirit outside another shrine at Kirindi on the west bank.

Shrine of Nakakwaya at Kirindi as seen from the river. The rise in the water level will inundate the location.

Worship tree at Budoda where Budoda spirit is said to reside.

The priestess of Nababirye spirit in traditional attire at home in Kisozi village.

AWE cultural heritage consultant at Nababirye shrine.

Priest of Nakyaaka spirit at riverside shrines.

Muddu-awulira on Nankandulo Island at Shrine.

Shrines for the —Enkunill clan spirit of the Baise Muwaya Clan.

APPENDIX B
GRAVES IN PROJECT AREA

An ordinary grave at Nampanyi.

Cemented grave in project zone

APPENDIX C POTSHERDS

Pot shard recovered in Nampanyi area.

Pot sherd recovered in Budoda vilage .West bank of Nile.

Potsherd recovered in Kirindi area.

Potsherd recovered in Bugumira area, east bank of the river Nile

APPENDIX D : POTTERY SHARDS ANALYSIS.

Pottery is seen by archaeologists as unavoidable chore (Orton *et al* 1993), a material that gives them room to study shards as dating evidence . It is therefore important for any cultural material assessor to note that every pot was made or used at a certain time, made at a certain place and used for a certain purpose or purposes.

Whilst conducting a cultural heritage impact assessment for Isimba Hydro Power project, the cultural heritage consultant observed and recovered pot shards that varied in decoration and parts. Those that were diagnostic were given attention. However a wide range of the undiagonistic ones existed in the study area especially in areas of Nababirye, Bugumira, Nandulo, Nampanyi, Kirindi, Budoda and Kalagala.

Pottery collected from the study area

The most outstanding decorations observed on pottery are wavy line which are probably Neolithic and roulettes. The presence of Neolithic pottery reflects the existence of early farming communities within the area. This trend is common in the interlacustrine region especially areas surrounding Lake Victoria and the Nile Valley. This development is attributed to the Bantu speakers who are said to have come into this area during 500BC (Fagan and Oliver 1975). The cultural package of Bantu also contained Iron production and small community settlements. Closely related traditions have been reported on Bussi Island in Lake Victoria (Tibesasa 2010) and Kyagwe area (Chami and Tibesasa 2010).

This was a reconnaissance survey, a more systematical archaeological exercise would have yielded a richer harvest of artefacts as this area seems to be rich in archaeological materials. Chatting with the local residents also confirmed presence of similar potsherd in their farmlands.

REFERENCES

Fagan and Oliver (1975) *Africa in the Iron Age c.500BC to A.D.1400*. Cambrige: Cambrige University Press.

Chami and Tibesasa (2010) —The Archaeology of Kinanisi-Senyi Ugnadall *Studies in African Past*. Vol 8 pp110-123.

R. Tibesasa (2010) —The Cultural sequence of on Bussi Island, Lake Victoria-Ugandall *Studies in African Past*. Vol 8 pp 89-109.

Orton, C etal (1993) Pottery in Archaeology. Cambridge: Cambridge University Press