

APPENDIX

ADDENDUM ENVIRONMENTAL AND SOCIAL IMPACT OF THE ISIMBA HYDROPOWER PROJECT, THE KALAGALA OFFSET AREA

PROJECT ID No.: P133312

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Submitted To:

**Ministry of Energy and Mineral Development
Street Address: Plot No 29/33 Kampala Road
Building: Amber House
City: Kampala
Country: Uganda
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Submitted By :



ERM (P) Ltd.
(Environment & Resource Management Consultant)
P. O. Box: 12419, Puja Pratishan Marga-91,
New Baneswor, Kathmandu, Nepal
Tel: 4483064, 4465863; Fax: 01-4479361
E-mail: ermc@ermcnepal.com
Website: www.ermcnepal.com

in Joint Venture with



Nepal Environment and Scientific Services (P.) Ltd.
G.P.O. Box No. : 7301, Thapathali, Kathmandu
Tel: 00977-1-4244989, 4241001
Fax: 00977-1-4226028; E-mail: ness@mos.com.np
Web

And in association with



Appendix 1: Terms of Reference

CONSULTANCY SERVICES FOR ENVIRONMENTAL AND SOCIAL IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA (ADDENDUM)

Background:

1. **Isimba Project.** In order to further boost its national electricity supply, the Government of Uganda is now undertaking the development of the Isimba Hydropower Project, some 40 kilometers downstream of the Bujagali project. The World Bank is not the financier for the Isimba Hydropower Project nor the associated power transmission line. However, given the potential impact of Isimba upon the Kalagala Offset Area (KOA), the Government is engaging with the World Bank to find a mutually acceptable solution that would preserve the original spirit and intent of the Kalagala Offset¹ under the Indemnity Agreement for the Bujagali Hydropower Project.

2. **Indemnity Agreement.** In 2007, and in response to the country's chronic shortage of electricity, the Government of Uganda entered into an Indemnity Agreement with the World Bank for a Partial Risk Guarantee to support construction of the 250 MW Bujagali Hydropower Project. This Indemnity Agreement requires the Government to protect the natural habitat and environmental and spiritual values of the KOA (known in the Indemnity Agreement as the Kalagala Falls Site). The KOA encompasses about 10 km of free-flowing Nile River, along with nearby land areas including the entire Kalagala Central Forest Reserve (CFR) and Nile Bank CFR. This area was selected as a conservation offset, to compensate for the flooding of another free-flowing segment of the Nile by the now operational Bujagali Project. The Indemnity Agreement specifies that (without prior agreement from the World Bank), Uganda will not develop any power generation that could adversely affect the protection of the KOA. Therefore, to ensure compliance with the Indemnity Agreement, no river impoundment, nor pre-impoundment tree cutting or other vegetation clearance, can take place within the geographic boundaries of the KOA unless and until further agreement about this is reached with the World Bank.

3. **ESIA Addendum.** The Government of Uganda intends to further strengthen the Environmental and Social Impact Assessment (ESIA) for the Isimba Hydropower Project to ensure that it (i) meets international standards in addressing all impacts of the project on the KOA and (ii) provides a firm basis for engagement between Government and the Bank on ensuring compliance with the Indemnity Agreement. This is to be done through the preparation of an Addendum to the Isimba ESIA that would specifically cover the main environmental and social impacts and corresponding mitigation measures for the Isimba Hydropower Project as it could affect the KOA. In addition to the Isimba ESIA Addendum, Government intends to prepare a separate Long-term Conservation Options (LTCO) Report for the KOA, to address specific issues that extend beyond the impacts of the Isimba project. These Terms of Reference (ToR) encompass both the Isimba ESIA Addendum and the LTCO Report, which the Consultant for this assignment would prepare in parallel. These ToR take into account the World Bank's written comments (March 2015) on the existing Isimba ESIA.

¹ "Kalagala Offset" and "Kalagala Falls Site" are used interchangeably in these ToR. Also, the Indemnity Agreement provides for conserving the present ecosystem of the Mabira Central Forest Reserve, but this area lies outside the KOA boundaries and would not be affected by the Isimba Hydropower Project, nor by the associated new, 132 kV transmission line.

Objectives:

4. The objectives of this consultancy are to prepare (i) an Addendum to the Isimba ESIA that addresses the main environmental and social impacts and corresponding mitigation measures for the Isimba Hydropower Project, specifically as it would affect the KOA and (ii) a Long-term Conservation Options Report that would identify options for ensuring a firm legal status and sustainable funding for the KOA. The ESIA Addendum should meet international standards in addressing all potentially significant impacts of the Isimba project upon the KOA. Both the Addendum and LTCO Report should provide a solid information base for the Government of Uganda to engage with the World Bank in finding a mutually acceptable solution that would enable Isimba Hydropower Project development to proceed in a manner consistent with the spirit and intent of the Indemnity Agreement. **The Consultant's principal task will be to prepare two free-standing reports involving the Kalagala Offset Area: The ESIA Addendum and the Long-term Conservation Options Report.**

Scope of Work—ESIA Addendum:

5. The ESIA Addendum would pertain to the existing ESIA package for the Isimba Hydropower Project, which comprises the Environmental Impact Assessment (EIA, November 2014), Social Impact Assessment (SIA, December 2014), and Resettlement Action Plan (RAP, September 2013). The Addendum should include important information from the original Isimba ESIA package as it relates specifically to the geographic land and water area within the KOA. Accordingly, the Addendum should incorporate the relevant physical, biological, and socio-economic baseline data, the expected environmental and social impacts (positive as well as negative), and the corresponding mitigation (or enhancement) measures, as they pertain specifically to the KOA. Conversely, the Addendum is not expected to address those environmental and social impacts that would occur exclusively outside the KOA and Mabira CFR, including the impacts around, or downstream of, the Isimba dam construction site.

6. **Analysis of Alternatives.** The ESIA Addendum should include an Analysis of Alternatives of different possible Isimba dam heights, reservoir operating levels, and water release regimes, to the extent that these alternatives would differentially affect the KOA. The implications of each alternative reservoir operating level for the conservation of the KOA and associated human uses should be clearly explained. In particular, the Analysis of Alternatives should include economic analysis, which, inter alia, should reflect the trade-offs between the benefits of increased electricity generation and the net losses from other economic activities, for Isimba Alternative 1 as well as for other options. It should be noted that the existing Isimba EIA (Sections 9.5.1 and 9.5.3) states that Alternative 1 is economically preferable to Alternative 2 because the value of increased power generation outweighs the costs of lost income from tourism, but it does not provide the substantiating data and analysis; the Addendum should fill this particular information gap, and others as appropriate.

7. The Addendum's Analysis of Alternatives should make use of and expand upon the relevant information contained in the existing Isimba EIA (Sections 9.4.3 and 9.5), taking care to be more detailed, transparent, and clearly written than in the current EIA and SIA. This analysis should provide key basic data, including the power output, rated capacity, construction and operating costs, and the resettlement, compensation, and environmental mitigation costs for each of the alternatives considered. Much of this information is contained within the Isimba Feasibility Study (2012). The Addendum should also explain more clearly the numerical ratings of each alternative than has been done so far in Table 36

of the existing EIA, and complement it with a more complete economic analysis. The Addendum's improved Analysis of Alternatives will enable both the Government and the Bank to respond more effectively to numerous inquiries and comments related to tourism and whitewater recreation, which has aroused great interest at the national as well as international level.

8. **Impacts of Hydropower Project.** The ESIA Addendum should describe the expected environmental and social impacts of the Isimba Hydropower Project within the land and water boundaries of the KOA, by providing the relevant baseline information and the expected changes as a result of project construction and operation. The Addendum should focus particular attention on the following considerations:

a. **Inundation Area.** The Addendum needs to describe and quantify the length (in km) and surface area (in ha) of free-flowing river and adjacent land areas within the KOA that would be inundated or otherwise affected by Isimba (Alternative 1 and other proposed alternatives). The land area data should distinguish between forest or other natural vegetation, non-native forest plantations, and cultivation or other areas of intensive human use.

b. **Aquatic Biodiversity.** The Addendum needs to summarize key baseline information about the fish and other aquatic life in the area of influence of the Isimba Hydropower Project, particularly within the KOA. In so doing, the Addendum should make use of relevant information provided by the National Fisheries Resources Research Institute (NAFIRRI). This includes previous reports such as the *Haplochromine Habitat Study* (2001) and *First Quarter Survey of the Aquatic System and Fisheries of the Upper Victoria Nile* (2006), along with relevant portions of the Isimba and Bujagali EIA reports. The Addendum should describe the expected impacts of Isimba on the different species of fish and other aquatic life within the KOA, as well as any feasible mitigation measures. Particular attention should be devoted to species of global conservation concern, such as the endemic fish *Neochromis simotes*. The Consultant is not required to carry out additional fish sampling to prepare the Addendum, but should incorporate the key findings from previous reports, in consultation with experienced NAFIRRI personnel.

c. **Spiritual Values.** The Addendum should describe the impacts—if any—of the Isimba project on the spiritual values of the KOA.

d. **Tourism and Recreation.** The Addendum should describe the ongoing tourism-related activities within the KOA that would likely be affected by the Isimba Project. In so doing, it should incorporate the relevant and accurate information from the Isimba Hydropower Project ESIA, along with other Ugandan and international reports. Among other information, the Addendum should specify and locate on a detailed map precisely which whitewater rapids would be lost to inundation by the Isimba dam (under various alternatives) and which would remain available for recreational use within the KOA. The Addendum should also assess the likely impacts of this change upon local businesses and communities, along with local employment and the broader economy including Jinja and beyond.

9. **Mitigation Options.** In terms of facilitating agreement between the Government of Uganda and the World Bank, the most important part of the Addendum will be a clear and systematic presentation of concrete, specific recommended options for mitigating any adverse impacts from the Isimba Hydropower Project upon the Kalagala Offset Area. This includes both direct environmental and social impacts. The mitigation options to be presented should include the ones indicated below, among others as appropriate. All proposed mitigation measures should include (as applicable) the (i) precise physical

location(s); (ii) defined institutional responsibilities; (iii) target implementation dates; (iv) estimated up-front and recurrent implementation costs; and (v) likely source(s) of funding.

a. **KOA Modification.** To compensate for the inundation of a portion of the KOA under the Isimba project, the boundaries of the KOA could be adjusted to encompass an upstream segment of the Nile River for example, along with adjacent river-edge lands (some of which would need to be reforested) and associated protected areas, if any. This would involve re-defining the KOA boundaries through an amendment to the Indemnity Agreement. The Addendum should provide baseline environmental information (physical, biological, and social) on any proposed KOA expansion area. It should indicate the key similarities and differences of the proposed expansion area (land and water) in comparison with the KOA area to be affected by Isimba, along with whether the proposed change in KOA boundaries could possibly be considered a net gain in terms of biodiversity and other values.

b. **Aquatic Biodiversity Monitoring.** The Upper Victoria Nile in general, and the KOA in particular, harbor significant aquatic biodiversity, including a high diversity of haplochromine cichlid fishes. However, the baseline data for this rich assemblage of native fish species remains highly incomplete, the most significant studies of the area to date (notably the 2001 *Haplochromine Habitat Study*) are not very recent, and NAFIRRI presently lacks the resources for any substantial biodiversity monitoring in the Nile. Accordingly, the Addendum needs to propose an aquatic biodiversity monitoring program for within and downstream of the Isimba reservoir, as well as upstream within the KOA (including its potential upstream expansion area).

c. **Alternative Tourism Development.** The Addendum should specify planned support for alternative tourism activities, to supplement reduced recreational opportunities within KOA attributable to the Isimba Hydropower Project; the SIA and the Kalagala Offset Sustainable Management Plan already mention certain such activities. To ensure consistency with the letter and spirit of the Indemnity Agreement, any such tourism development within the KOA will need to follow sound environmental and social standards acceptable to the World Bank.

d. **Compensation for Affected Persons.** Building upon the information already in the RAP for the Isimba Hydropower Project, the Addendum should explain clearly and systematically the policies, criteria, and procedures used for compensation of directly affected persons within the KOA.

e. **Spiritual Values.** The Addendum should propose measures, if needed, to ensure that the spiritual values of the KOA if any are appropriately protected in conformity with sound environmental and social standards.

f. **Reservoir Clearing.** The Addendum should specify whether any pre-impoundment reservoir clearing is planned for the lands within the KOA and, if so, why. The Addendum should indicate any recommended changes to current plans, based on a scientifically valid rationale.

g. **Environmental Rules for Contractors.** In the future, civil works might take place within the geographic area of the KOA (with prior World Bank agreement); these might include, for example, limited pre-impoundment reservoir clearing or alternative tourism infrastructure. In any such case, the Addendum should include clear, enforceable Environmental Rules for Contractors and their workers to follow, along with transparent penalties for non-compliance. These rules should include (i) **site-specific technical specifications** (where and how to dispose of any excavated earth or other wastes, allowable sites for equipment staging areas, etc.); (ii) **chance finds procedures** for any physical cultural resources (shrines, archaeological relics, fossils, human remains, etc.) that

might be uncovered while work is being planned or ongoing; and (iii) **rules of conduct** for construction personnel that prohibit hunting, bush-meat purchase, vegetation burning, washing of machinery or changing of lubricants in waterways, improper waste disposal, inappropriate interactions with local people, etc. The Environmental Rules for Contractors should be incorporated within any relevant bidding documents and contracts. The Isimba Hydropower Project EIA (Section 7.1.3) refers to the "sensitization" of construction workers, which is necessary but not sufficient: Besides being sensitized, the contractors and workers also need binding requirements to follow, with clear appropriate penalties if they do not.

10. **Public Consultation to Date.** The ESIA package for the Isimba Hydropower Project provides a useful stakeholder analysis and list of participants to date in the public consultation process. The Addendum should summarize this information as it relates to issues of public interest within the geographic space of the KOA. The Addendum should also describe the dates and venues of public consultation events, how such events were publicized, organizations that were invited, and other information relevant to the perceived adequacy of the consultation process.

11. **Addendum Maps.** The Addendum should include detailed, good quality, color maps of (i) the Upper Victoria Nile River between lakes Victoria and Kyoga, showing the Bujagali Dam, Kalagala/Itanda Falls, Kalagala Offset Area, and Isimba dam site; (ii) all remaining major rapids (Class 3+) in the upper Victoria Nile, before and after inundation by Isimba (different alternatives); (iii) the existing KOA, including the proposed Isimba (Alternative 1) inundation zone and the possible KOA expansion areas; (iv) the Mabira CFR in relation to the proposed alignment of the Isimba Transmission Line; and (v) any other map deemed necessary or useful by the Consultant.²

Scope of Work—Long-term Conservation Options Report:

12. The LTCO Report should describe the existing legal and conservation finance status of the entire Kalagala Offset land and water area. It should also propose concrete, specific options for strengthening the long-term legal status and financial sustainability of the KOA, focusing particular attention on the following considerations:

a. **Long-term KOA Conservation.** The long-term legal protection of the KOA land and aquatic area is important³. Accordingly, the LTCO Report should review existing laws and propose some type of conservation status under Ugandan law that would provide firm legal protection for the free-flowing river and adjacent land parcels within the (new) KOA boundaries. This report should describe how such protection would be achieved, including whether it might require the establishment of a new category of protected area, along with the passage of a new law—or whether it could be achieved through other legal or administrative options.

b. **Long-term KOA Funding.** The Indemnity Agreement provides for a sustainable management program and budget, mutually agreed by the Government of Uganda and the World Bank, for the KOA as well as the Mabira Central Forest Reserve. Much of this funding is now provided through the World Bank-supported National Water Resources Management Project. The LTCO Report should propose a longer term, sustainable source of funding for the on-the-ground protection and management of these areas, including

² Production of these maps for the Addendum should make full use of the detailed maps already available from the National Forestry Authority (NFA), Directorate of Water Resources, MEMD, and other Uganda Government agencies. If requested, the World Bank can provide technical support in the production of report maps (including an updated map of the existing KOA and proposed KOA expansion area).

³ The Bujagali Indemnity Agreement is expected to expire in 2022.

support for forest conservation and sustainable land use by local communities. Possibilities could include a proposed water tariff fee dedicated to catchment management activities and/or a relatively small, pre-defined contribution from power sale revenues. A key objective is to identify a long-term funding source for recurrent protection and management costs that would not be dependent upon international project funding.

13. **LTCO Report Maps.** The LTCO Report should include detailed, good quality, color maps where useful, particularly of the existing KOA, including the possible KOA expansion areas.

Methodology:

14. **Obtaining Information.** The Consultant (a team of specialists, as described below) will obtain much of the information needed for the ESIA Addendum and LTCO Report from (i) the existing ESIA package for the Isimba Hydropower Project; (ii) other key reports including the Isimba Feasibility Study; and (iii) the key people responsible for commissioning and preparing the Isimba ESIA. To fill information gaps, the Consultant will, as needed (i) confer with local stakeholders and Ugandan and international specialists; (ii) consult other documentation, including Bujagali-related and other previous studies as well as the recent World Bank comments on the Isimba ESIA; and (iii) visit field sites as needed, including the Isimba Hydropower Project area, existing KOA, and proposed KOA expansion area. However, the Consultant should not attempt to replicate the sampling, surveys, and other field work done for the existing ESIA package; rather, the main emphasis should be on filling information gaps and addressing the specific questions posed in these Terms of Reference.

15. **Contracting.** The Consultant will be contracted by the Government of Uganda, through the Ministry of Energy and Minerals Development (MEMD). The Consultant will report to Eng. Henry Bidasala-Igagaat MEMD. The key technical-level Government counterparts with whom the Consultant should collaborate will be provided by MEMD. The Consultant should also liaise with the following staff of the World Bank: George Ledec (Lead Ecologist, gledec@worldbank.org); Knut Opsal (Lead Social Development Specialist, kopsal@worldbank.org); Vladislav Vucetic (Lead Energy Specialist, vvucetic@worldbank.org) and Mark King, Chief, Environmental and Social Standards (mking3@worldbank.org). Any written communication between the Consultant and the World Bank should be copied to MEMD.

16. **Support.** With respect to logistical and technical support, MEMD will provide the Consultant's team with office space and supplies in Kampala MEMD will arrange for appropriate Government counterpart staff to accompany the Consultant's team, along with field assistants if needed (number and qualifications to be agreed upon). The Consultant firm to be selected is expected to make transport arrangements for the assignment.

17. **Public Consultation on Draft Addendum.** As indicated above, the ESIA Addendum will draw on the stakeholder analysis and public consultations that have already taken place, in particular those that are relevant to the Kalagala Offset Area. The Consultant will interview stakeholders as needed to fill information gaps in drafting the Addendum. The Consultant will carry out a public consultation process with local communities on supplemental information and analysis in the Addendum (Disclosure Draft version, described below). The Consultant will consult with MEMD for guidance of the scope of this public consultation (consultation methods to be used, number and location of consultation events, publicity for consultation events, which organizations to invite, etc.). MEMD will also provide any needed logistical support to publicize and conduct the consultation events.

18. **Deliberative Status of LTCO Report.** In contrast to the ESIA Addendum, the LTCO Report will be considered a deliberative document, intended to facilitate agreement between

the Government of Uganda and the World Bank on the longer-term conservation issues associated with the KOA. As such, it will not be subject to public consultation or disclosure, unless and until both the Government and the Bank agree to do so.

Reporting requirements with Specific reports and Time Schedules

19. The Consultant will provide the following written outputs to the Government of Uganda (through MEMD), which will also be shared with the World Bank:

a. Two separate brief **Inception Reports (one will be on ESIA Addendum and the second will be on Long-term conservation options) within 10 calendar days of contract effectiveness on the two components of the study respectively**, indicating the Consultant's plans, approach, and updated schedule for carrying out this assignment, progress to date, and any new issues or concerns that may have arisen. This report will identify any major data gaps that have been identified through office or field reviews and the planned activities to fill those gaps.

ESIA Addendum: Deliverables

- a. A **First Draft ESIA Addendum** report with complete text (and maps under preparation), **within 75 calendar days of contract effectiveness**, to be provided for review and comment to MEMD (who will share with other Government agencies) and the World Bank.
- b. **Comments** will be provided **on the First Draft ESIA Addendum** report by the MEMD (on behalf of the Government of Uganda) and the World Bank **within 10 calendar days**.
- c. A **Disclosure Draft ESIA Addendum** report that incorporates comments provided by MEMD (on behalf of the Uganda Government) and the World Bank on the First
- d. Draft Addendum, **within 15 calendar days of receiving said comments**.
- e. A **Draft Final ESIA Addendum** report that incorporates stakeholder comments from the public consultation on the Disclosure Draft Addendum and includes a Response Matrix of how comments were addressed, **within 15 calendar days from the Public Consultation Closing Date** to be established by MEMD (in consultation with the World Bank).
- f. **Comments** will be provided on the **Draft Final ESIA Addendum** report by MEMD (on behalf of the Government) and the World Bank **within 10 calendar days**.
- g. A **Final ESIA Addendum** report that incorporates comments from MEMD and the World Bank on the Draft Final Addendum, **within 10 calendar days of receiving said comments**.

LTCO Report

- h. A **Draft LTCO Report** **within 85 calendar days of contract effectiveness**, to be provided for review and comment to MEMD (who will share with other Government agencies) and the World Bank.
- i. **Comments** will be provided on the Draft LTCO Report by the MEMD (on behalf of the Government) and the World Bank **within 10 calendar days** after receiving the Draft LTCO Report.
- j. A **Final LTCO Report** that incorporates comments from MEMD (on behalf of the Government) and the World Bank on the Draft LTCO Report, **within 15 calendar days of receiving said comments**.

Duration of the assignment

This consultancy is expected to complete the assignment within six and half (6.5) calendar months from contract commencement date.

CONDITIONS OF APPROVAL
(Additional Information Sheet)

CONDITIONS OF APPROVAL FOR THE PROPOSED 183MW ISIMBA HYDROPOWER
PLANT

In addition to implementing the mitigation measures outlined in the Environmental and Social Impact Statement (EISS), this Certificate of approval is granted on condition that the developer - M/S Ministry of Energy and Mineral Development shall comply with approval conditions stated below:

ADMINISTRATIVE CONDITIONS OF APPROVAL

1. This Certificate of approval is VALID FOR A PERIOD OF 5 YEARS - the period which covers both the construction and operational phases of the Project.
2. The Project MUST COMMENCE WITHIN THE FIRST 24 MONTHS (from the date of approval) of the validity period, failure of which the Certificate may be varied, cancelled or otherwise dealt with by this Authority.
3. The Executive Director SHOULD BE NOTIFIED of any transfer of ownership, variation/alteration of the Project design or components, or surrender of this Certificate of approval.

1.0 SPECIFIC CONDITIONS OF APPROVAL

(a) CONDITIONS OF APPROVAL SPECIFIC TO THE KALAGALA OFF-SET AREA

(i) Undertake a separate Environmental Impact

Dated at KAMPALA on 19TH MAY, 2015 20

Signed

Executive Director (NEMA)



183MW ISIMBA HYDROPOWER PLANT | CERT.NO.6240



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

CONDITIONS OF APPROVAL FOR THE PROPOSED 183MW ISIMBA HYDROPOWER PLANT, TRAVERSING JINJA DISTRICT (*TWO VILLAGES IN BUTAGAYA SUB-COUNTY, KAGOMA COUNTY*), KAMULI DISTRICT (*TWELVE VILLAGES IN KISOZI SUB-COUNTY, BUZAYA COUNTY*), AND KAYUNGA DISTRICT (*THIRTEEN VILLAGES WITHINNAZIGO, KANGULUMIRA AND BUSAANA SUB-COUNTIES, NTENJERU COUNTY*)

Study for the Kalagala Off-set Area (KOA) to cater for the main Environmental and social impacts and the mitigation measures associated with the Isimba Hydropower Plant as it will impact on the KOA; and, prepare an addendum to this ESIS for approval by this Authority

- (ii) The Addendum to the Isimba ESIA should cover: analysis of alternatives; impacts associated with the implementation of the Hydropower Plant – including, among other, *inundation area; aquatic biodiversity; spiritual values; tourism and recreation; mitigation options; KOA modification to compensate for the inundation of a portion of the KOA under the Isimba project, and the boundaries of the KOA could be adjusted to encompass an upstream segment of the Nile River; aquatic biodiversity monitoring; alternative tourism development; compensation for affected persons; spiritual values; reservoir clearing; and maps (aren't some of these issues in the EIS under review).*
- (iii) Note that the addendum will be approved after approval of the main ESIS for the Isimba Hydropower Plant.
- (b) **CONDITIONS OF APPROVAL SPECIFIC TO THE ISIMBA HYDROPOWER PLANT**
- (iv) Pay due regard to environmental concerns during planning, construction and operational phases of the proposed Project; and, obtain all the necessary approvals from the relevant Lead Agencies regarding specifications of the design of the Hydropower Plant and its auxiliary components, site layout plans for various support structures and components to be accommodated in Jinja, Kamuli and Kayunga Districts, respectively.

Appendix 3: Key Policy and Legislative Provisions of the Republic of Uganda related to Hydropower Development

Policies, Regulatory Mechanism	Environmental provisions for water resources management & energy development
National Policy	
The National Environment Management Policy, 1994	<p>The National Environment Management Policy aims at the promotion of sustainable economic and social development. It makes integration of environmental concerns into all policy formulation and project implementation at governmental levels. Projects likely to have significant adverse impacts on the environment thus must undertake EIAs before their implementation in accordance with the National Environment Act and the regulations and guidelines set out thereunder.</p> <p><i>The development of Isimba HPP is one of those that call for an EIA before implementation by the developer (owner).</i></p>
Uganda's Vision 2040	<p>Vision 2040 sets out certain economic, energy and environment goals targeted to be achieved by Uganda by the year 2040. Under this policy Uganda aspires to have sustainable social-economic development with quality environment and ecosystem preservation. Energy is expected to be a panacea to industrialization and economic development. It is estimated that the per capita energy consumption will be 3, 6668 kWh of electricity of generated electricity. If this is to be achieved all possible sources of energy both renewable and non-renewable will need to be exploited.</p> <p><i>The construction of Isimba HPP is thus a part fulfillment by the Uganda Government of the Vision 2040.</i></p>
National Development Plan, 2010	<p>The 5-year National Development Plan (NDP) covers the 2011-2015 five years. The theme of the National Development Plan is — <i>Growth, Employment and Socio-Economic Transformation for Prosperity.</i></p> <p>Under the NDP GDP growth rate is estimated at an average of over 7% per annum and raising the per capita income to about USD 850 by 2014/15 lessening the poverty levels in the country to about 24.5 % by 2014/2015. Energy including electricity is identified as one of the elements needed to achieve these goals.</p> <p><i>The construction of Isimba is thus needed to achieve this goal.</i></p>
Master Plan Study on Hydropower Development in Uganda, 2011	<p>The Hydro Power Master Plan 2010 is the major plan for hydro power development in Uganda.</p> <p>It prioritizes development plans of potential hydropower sites on the basis of optimal technical (including environmental considerations) and financial cost.</p> <p><i>Isimba HPP development prioritisation is in line with the Hydro Power Master Plan recommendation.</i></p>
The Energy Policy, 2002	<p>Uganda Government made the Energy Policy as far away as 2002 aimed at addressed the social and economic development of energy resources in an environmentally sustainable manner. The policy recognizes inter-linkages between the energy and other sectors such as the environment, water resources, agriculture, forestry, industry, health, transport, education, decentralization and land use.</p> <p><i>The Isimba HPP development thus addresses the need to access more</i></p>

	<p><i>energy required for sustainable development of Uganda and it must be carried out in a way that is a consistent with the environment laws in Uganda.</i></p>
Renewable Energy Policy, 2007	<p>The overall objective of the Renewable Energy Policy is to diversify energy supply sources and technologies in Uganda. Hydro power development is one of those diverse sources that must be harnessed to meet the objectives of this Policy.</p> <p><i>The development of Isimba HPP will significantly increase on the diverse sources of energy for Uganda.</i></p>
The Forestry Policy, 2001	<p>The vision of the National Forestry Policy states as follows – “A sufficiently forested, ecologically stable and economically prosperous Uganda”. The guiding principles for the Forest Sector build on the government national development priorities for poverty eradication and good governance. The policy is also in conformity with the national objectives and principles as set out in the Constitution of Uganda and enshrines the principles of promotion of sustainable energy policies, the creation of parks, natural resource conservation, biodiversity and environmental services and partnership governance with the role of the central government, local government, private sector, local communities and farmers and the role of Non-Governmental Organization.</p> <p><i>Isimba HPP is situate in an ecologically sensitive area and is surrounded by a number of forest reserves. Its development thus must be in conformity with the basic intents of the National Forest Policy.</i></p>
Wetlands Policy, 1995	<p>The National Wetland Policy of Uganda sets pout the national policy for the conservation and management of wetland resources in Uganda. It recognizes that wetlands are a natural resource of considerable importance with huge social, economic and ecological functions should be protected by the Government. The policy aims at inter alia the management of drainage in wetlands, non-destruction of wetlands and maintaining an optimal diversity use and users in consideration of all stakeholders. The Policy sets out guidelines to guide persons proposing to use wetlands for certain purposes including construction of dams. It also sets out guidelines for traditional uses of wetlands and access, water use balancer activities, papyrus harvesting, protection of natural fish stocks and culturing and the protection of catchment areas.</p> <p><i>Isimba HPP development will have a significant impact on the wetland catchment areas around its site on the River Nile.</i></p>
National water policy 1999	<p>The Water Policy recognizes freshwater to be a strategic resource vital for life sustenance, socio economic development and maintenance of the environment. Water is recognized as finite resource that is vulnerable to pollution and degradation through natural and human factors. The Water Policy thus sets out a framework for water resource management, regulation and prioritization of development and the optimal use and protection of the nation’s water resources.</p> <p><i>The development of the Isimba Project is a human activity that has significant impact on the waters of the River Nile and the other catchment areas and must be executed in accordance with the objectives of the Water Policy and all supporting laws and regulations.</i></p>
The Fisheries Policy, 2004	<p>The policy on fisheries seeks to ensure that adverse environmental impacts on fisheries are minimized including pollution of watercourses by industrial and infrastructural development.</p> <p><i>The River Nile where Isimba HPP is to be constructed is an area identified to be a prolific habit for fisheries and the construction of the project will influence changes in fisheries resources and species diversity both upstream and downstream of the dam.</i></p>

<p>Wildlife Policy, 2014</p>	<p>The Wildlife Policy aims at providing guidelines for the conservation and development of wildlife in Uganda. The policy provides a framework within which all government institutions, private sector, development partners, civil society and other stakeholders in the wildlife conservation industry must operate sustainably to conserve and develop wildlife resources in Uganda. The policy also aims at mitigating human/wildlife conflicts eliminating wildlife trade and trafficking, promoting research and conservation education and enhancing community benefits from conservation and promoting private sector enterprise in wildlife conservation.</p> <p>The state is also recognized as the trustee on behalf of the people of Uganda in the management of wildlife resources.</p>
<p>Uganda Resettlement/Land Acquisition Policy Framework (2002)</p>	<p>The construction of the Isimba HPP and the implementation of the Kalagala Option Area (KOA) has certain identifiable social and environmental interruptions. These include displacement of people, their families and sources of their livelihood. The acquisition of land must be consistent with the provisions of the Constitution of Republic of Uganda, the Land Acquisition Act and the Land Act. The policy sets out some of the basic objectives. Adequate compensation and minimum social interruption are necessary prerequisites under this policy.</p> <p><i>Development of the Isimba HPP requires not only compliance with the Constitution, the Land Acquisition Act, the Land Act and Resettlement Action Plan.</i></p>
<p>Legislations and Regulations</p>	
<p>The Constitution of the Republic of Uganda, 1995</p>	<p>The Constitution is the supreme law of Uganda and has binding force on all authorities and persons in Uganda.⁴ The Constitution obliges the State to protect important natural resources including land, water, wetlands, fauna and flora on behalf of the people of Uganda. Under the Constitution the State is under an obligation to promote sustainable development and public awareness regarding the need to manage land, air and water resources in a balanced and sustainable manner for the present and future generations.⁵ Cultural and customary values which are consistent with fundamental rights and freedoms may be developed, promoted and preserved by the state.⁶ Under the Constitution the state is empowered to take all possible measures to prevent the misuse, damage or destruction to land, air and water resources. The state is also obliged to promote and implement energy policies that will ensure that people's basic needs and those of environmental preservations are met.⁷ The state (including local governments) are empowered to create and develop parks, reserves and recreation areas and ensure the conservation of natural resources and to promote the national use of natural resources so as to safeguard and protect the bio diversity of Uganda.⁸ Under the Constitution every Ugandan has a right to a clean and healthy environment and in that respect the Parliament is obliged to make laws to protect and preserve the environment from abuse, pollution and degradation.⁹</p>

⁴ Article 2(1) of the Constitution

⁵ Objective XXV11 of the Constitution

⁶ Objective XXIV of the Constitution

⁷ Objective XXVI of the Constitution

⁸ Objective XXVII of the Constitution

⁹ Article 245 of the Constitution

	<p>The Constitution further provides for the ownership, acquisition and management of land and land use.¹⁰</p> <p>The Constitution provides for the protection of and right to own private property but also allows for the compulsory acquisition of property where the property is necessary for public upon prompt payment of fair and adequate compensation prior to the acquisition.¹¹</p> <p><i>The use of the waters of the Nile and the carrying out of activities like the construction of the Isimba HPP requires full compliance with the provisions of the Constitution and the support laws as evaluated below. The development has significant negative impact on the flora and fauna within the catchment area and the use of the River Nile Waters. The Kalagala Offset therefore was couched under the same abidance principle for sustainable protection of the environment. To the extent that the Uganda Government has decided to develop Isimba HPP and the development is likely to have a negative impact on the Kalagala Offset Area it is important that remedial measures that may include acquisition of alternative compensatory land for the inundated land or land under the Kalagala Offset Area affected in anyway by this new development the Government must abide with the provisions of the Indemnity Agreement and the other laws of Uganda. The acquisition of any such compensatory land is also supported under the Constitution since the undertaking of the Isimba HPP is a public interest project.</i></p>
<p>The National Environment Act, Cap 153 (1995)</p>	<p>This Act provides for the sustainable management of the environment, establishes the National Environment Management Authority (NEMA) which is supposed to coordinate, monitor and supervise the sustainable management of the environment.¹² The principles of environmental management include inter-alia ensuring that all people living in Uganda are assured of an environment adequate for their health and well-being, to conserve the environment and natural resources of Uganda, to conserve the cultural heritage of Ugandans, to reclaim lost ecosystems where possible and to reverse the degradation of natural resources, to require prior environment assessments for proposed projects (<i>including dams</i>) which may significantly affect the environment or the use of natural resources.¹³</p> <p>The Act further provides that no person shall in relation to a river or lake erect or demolish, excavate, drill or disturb a riverbed or divert or block any river, from its natural course without a waiver from the NEMA. NEMA has issued guidelines for the management of riverbanks, wetlands and forests in Uganda and for the carrying of environmental impact assessments.¹⁴</p> <p>The Act entrusts NEMA, lead agencies and the district environment committee with powers to protect quality of watercourses, permanent or seasonal water systems from human activities that could adversely affect them.¹⁵</p> <p>Under this Act a number of statutory instruments have been made:</p> <p>(a) <u><i>The National Environment (Environmental Impact Assessment) Regulations, Statutory Instrument 153-1:</i></u></p> <p>These regulations provide for the process of carrying out Environmental Impact Assessments for specified projects including dams. They require that the EIA process be executed through</p>

¹⁰ Chapter 15 of the Constitution

¹¹ Article 26 of the Constitution

¹² Preamble to the Act

¹³ Section 2 of the Constitution

¹⁴ Section 36 of the Constitution

¹⁵ Section 35 of the Constitution

	<p>participatory engagement of the general public and stakeholders. The stakeholders require consultation and to inform them and obtain their views about the proposed development.</p> <p>A project developer must carry out EIAs satisfactory to the NEMA and obtain a license before the execution of such a project.</p> <p>(b) <u><i>The National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, SI 153-3:</i></u></p> <p>These regulations set the standards of effluent or waste water that should be discharged into water or land.</p> <p>(c) <u><i>The National Environment (Wetland, Riverbanks and Lakeshore Management) Regulations, S1 153-5:</i></u></p> <p>These regulations provide for the protection of wetlands and riverbanks. A riverbank is defined as the rising ground not more than one hundred metres long bordering or adjacent to a river while a wetland is defined as an area permanently or seasonally flooded by water where plants and animals have become adapted.¹⁶ No person shall carry out an activity in a wetland without a permit issued by the Executive Director of NEMA.¹⁷ EIAs are mandatory for all major activities on riverbanks. River Nile is one of the rivers in Uganda that must have a protected zone of one hundred metres from its highest river mark and no activity is permitted within such zone without the written authority of the Executive Director of NEMA.¹⁸</p> <p><i>THESE LAWS THUS PROVIDE FOR THE NEED AND PROCESSES OF CARRYING OUT ENVIRONMENT IMPACT ASSESSMENTS. THE ISIMBA PROJECT IS A PROJECT THAT REQUIRES (D) A COMPREHENSIVE EIA.</i></p>
<p>Electricity Act, Cap 145 (1999)</p>	<p>This Act provides for the establishment of the electricity regulatory authority, the licensing of generation, transmission and sale of electricity.¹⁹ The Act also has provision for the establishment of electricity tariffs.²⁰</p> <p><i>It can be decided that a component of the tariff for the generation of power from Isimba is used to fund the sustainable management of the KOA the Electricity Regulatory Authority would have to approve such tariff component.</i></p> <p>The Electricity Act provides that before licensing for the establishing a power generation station assessment of impact of the project on the environment must be undertaken.²¹</p> <p><i>The Uganda Electricity Generation Company Limited the owner of the Isimba Hydro Power Complex is in the process of acquiring the generation license having obtained the environment certificate from NEMA.</i></p>
<p>Water Act, Cap 152 1997</p>	<p>This Act provides inter alia for the use, protection and management of water resources and supply.²² The objectives of this Act include among others the orderly development and use of water resources such as the generation of hydroelectric energy.²³ All rights to use water is vested in the Government and these rights must be exercised by the Minister and the Director of Water Development.²⁴ No person should construct or operate any works on any river</p>

¹⁶ Regulation 1

¹⁷ Regulation 12

¹⁸ Regulation 29 and Sixth Schedule to the Regulations

¹⁹ Preamble to the Act

²⁰ Part X of the Act

²¹ Section 33 of the Act

²² Preamble to the Act

²³ Section 4 of the Act

²⁴ Section 5 of the Act

	<p>unless such person is so permitted under this Act.²⁵ A numbers of Regulations have been made under this Act:</p> <p>(a) <u>The Water (Water Resources) Regulations, Statutory Instrument 152 – 1</u></p> <p>Any person who wished to construct or control any works capable of diverting or impounding water of more than 400 cubic meters must obtain a water permit issued by the Director of Water Development. Any person who wishes to construct any works for the purposes of damming any surface water must obtain a construction permit issued by the Director Water Development.²⁶ These regulations also provide for the processes of applying for the said permits.</p> <p>(b) <u>The Water (Water Discharge) Regulations Statutory Instrument 152 – 4</u></p> <p>No person shall discharge effluent or waste on land or into an aquatic environment contrary to the standards established under these regulations.²⁷ A person wishing to discharge such prohibited effluent or waste is required to obtain a waste discharge permit issued by the Director of Water Development.²⁸ These regulations also provide for the procedures of acquiring a waste discharge permit.²⁹</p>
<p>Land Act, Cap 227 1998</p>	<p>This Act provides for the tenure, ownership and management of land.³⁰ It also provides that the Government or a local government may acquire land in accordance with the Constitution.³¹</p> <p>Land in Uganda can be owned under the following land tenure systems:³²</p> <p>(a) <i>Customary Land Tenure</i> – this is where land is owned in accordance with local customary regulations and management. It usually also provides for communal land ownership and use systems and under it land may be recognised as belonging to a person, family or a traditional institution. Under it land is owned in perpetuity. The owners are also upon application entitled to customary ownership certificates.</p> <p>(b) <i>Freehold Land Tenure</i> – this is where land is owned in perpetuity and so registered. The holder of freehold title exercises full powers of ownership and the owner may deal in the land in any lawful manner by his exclusive will.</p> <p>(c) <i>Mailo Land Tenure</i> - this involves holding of registered land in perpetuity and permits the separation of ownership of land from ownership of developments made by a lawful or bonafide occupants. It has all the other tenets of freehold title.</p> <p>(d) <i>Leasehold Tenure</i> – this is a form of tenure created by contract or operation of law. It creates an arrangement of a tenant/landlord relationship with the tenant have exclusive possession for a defined period of time referenced to a specific date of commencement and expiry usually for rent and or a premium.</p>

²⁵ Section 18 of the Act

²⁶ Regulation 15 of the regulations

²⁷ Regulation 3 of the regulations

²⁸ Regulation 4 of the regulations

²⁹ Regulations 5-12 of the regulations

³⁰ Preamble to the Act

³¹ Section 42 of the Act

³² Section 2 of the Act

	<p><i>These tenure systems are important in identifying the land that may be required for compensation and alternative resettlement processes for or on any land that will be taken from the KFS by the implementation of the Isimba Project.</i></p> <p>Under this Act the government or a local government shall hold in trust for the people and protect natural lakes, rivers, ground water, natural ponds, natural steams, wetlands, forest reserves, national parks and any other land reserved for ecological and touristic purposes for the common good of the citizens of Uganda.³³ With the approval of Parliament, any resource so identified after the coming into force of the land Act may also be held in trust by a local government for the common good of the citizens of Uganda.³⁴</p> <p><i>Though the Government or the local government may grant concessions, licenses or permits in respect of the natural resources of the land so held in trust such land cannot be leased or otherwise alienated. All such land so held in trust is subject to existing public right of way.</i>³⁵</p>
<p>Historical and Monuments Act, 1967</p>	<p>This act provides for the preservation and protection of historical moments and objects of archaeological paleontological, ethnographical and traditional interest.</p>
<p>National Forestry and Tree Planting Act, 2003</p>	<p>This Act provides for the conservation, sustainable management and development of forests for the benefit of the people of Uganda.³⁶ Under the Act the Minister on advice of the Board of the National Forest Authority and after consultation with local council and community where a proposed area for a forest reserve is to be established may with the approval of the Parliament declare an area to be a central forest reserve and shall declare such central forest reserve a site of scientific interest, a strict nature reserve, a joint forest reserve, a recreation forest or any other area so prescribed in the order.³⁷ The Act also provides for the procedure of establishing or amending an existing forest reserve. It also provides for the declaration of forest reserves sustainable use of forest resources and the enhancement of the productive capacity of forests.³⁸</p> <p><i>The establishment of the new compensatory land will require the Minister to exercise such powers in case the new land is to form part of the central forest reserves already existing in and around the KOA.</i></p> <p>The Act also provides for the establishment of the National Forestry Authority.³⁹</p> <p>The Act classifies forests into the following categories;⁴⁰</p> <ul style="list-style-type: none"> (a) <i>Central Forest Reserves;</i> (b) <i>Local Forest Reserves;</i> (c) <i>Private Forests; and</i> (d) <i>Forests forming part of a wildlife conservation area under the Uganda wildlife Act Cap 200.</i>
<p>Uganda Wildlife Act, Cap 2000</p>	<p>This Act provides for the sustainable management of wildlife conservation areas, the conservation of selected wildlife communities in Uganda, the protection of rare, endangered and endemic species of plants and animals and the establishment of wildlife user rights and promotion of tourism.⁴¹ It also</p>

³³ Section 43(1) and (2) of the Act

³⁴ Section 43(3) of the Act

³⁵ Section 43(4) and (5) of the Act

³⁶ Preamble to the Act

³⁷ Section 6 of the Act

³⁸ Section 8 of the Act

³⁹ Section 52 of the Act

⁴⁰ Section 4 of the Act

⁴¹ Section 2 of the Act

	<p>establishes the Uganda Wildlife Authority⁴² that is mandated to coordinate, monitor and supervise the implementation of the Act including ensuring sustainable management of wildlife conservation areas and recommendation of areas as wildlife conservation areas.⁴³ Inter alia the Act provides for the procedure for the declaration and establishment of wildlife conservation areas.⁴⁴ The two categories of wildlife conservation areas are (i) wildlife protected areas that would include national parks and wildlife reserves and (ii) wildlife management areas that would include wildlife sanctuaries and community wildlife areas.⁴⁵ Wildlife and plants existing in the wild habitat in Uganda are vested in the Government on behalf and for the benefit of the people of Uganda.⁴⁶</p>
<p>Local Governments Act, Cap 243</p>	<p>This Act provides for the decentralized governance and devolution of functions, powers and services of the central government to the local governments.⁴⁷ Local governments have been allotted certain powers to oversee implementation of development activities including supervision and monitoring of environment, lands and water resources.⁴⁸ The Act also allows a local government as a political and administrative authority in its area of jurisdiction powers to exercise both legislative and executive powers in accordance with the Constitution.⁴⁹</p> <p><i>The Isimba Project affects more than one district and hence there will be constant need to deal with these districts in matters relating to land, environment and water. This also will apply to the new KOA implementation activities and planning.</i></p>
<p>Rivers' Act, Cap 358</p>	<p>This Act provides that the dredging of a river requires a dredging license.⁵⁰ In spite of not repealing the requirement of the requirement for a dredging license there has been a tendency to assume that this requirement is covered in the event that an owner of the hydro power project has a construction license under the Water Act.</p>

⁴² Section 4 of the Act

⁴³ Section 5 of the Act

⁴⁴ Section 7 of the Act

⁴⁵ Section 18 of the Act

⁴⁶ Section 3 of the Act

⁴⁷ Preamble to the Act

⁴⁸ Part 111 of the Act

⁴⁹ Part 111 of the Act

⁵⁰ Section 4 of the Act

Appendix 4: Key Provisions of the International Convention and Treaties

International Conventions and Treaties	Related Provisions
The Biological Diversity Convention, 1992	Uganda is a party signatory to the Convention on Biological Diversity, This Convention requires each Party to integrate sustainable utilization of natural resources into its national strategies and plans and programmes, to promote <i>in-situ</i> conservation through protection of traditional knowledge about conservation and protection of threatened species, to promote sustainable use of biological diversity, to create economically and socially sound incentives for conservation and sustainable utilization. It also requires Parties to promote research, training and public awareness and education and to introduce environmental impact assessment in their legal systems and to promote bio safety. Most of these requirements are now embedded in a set of Uganda laws that cover wildlife and environment such as the National Environment Act, Cap 153 and the Uganda Wildlife Act, Cap 200 of 2000.
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973	The main objective of this Convention is to control and regulate international trade in wildlife species through species classification and the use of permits.
The Ramsar Convention, 1971	The Ramsar Convention provides for the protection of biological diversity in wetlands including watercourses and lakes. The Convention provides for the intergovernmental framework to develop a conducive environment for international co-operation in the conservation and management of wetlands. Parties to the Convention are requires to include at least one wetland on the list of 'Wetlands of International Importance', and take active conservation measures for those wetlands included in the list. Uganda has now has several Ramsar sites and has adopted policies and laws that ensure compliance with this convention.
The African Convention on the Conservation of Nature and Natural Resources, 1968	This Convention is the primary Pan-African legal instrument for the conservation of the environment in general and biological diversity in particular. The Convention adopts an ecosystem approach to environmental management, and provides for measures to ensure conservation, utilisation and development of natural resources such as soil, water, flora and fauna resources, in accordance with scientific principles and taking into account the interests of the inhabitants. Parties to the Convention undertake to establish and manage Protected Areas, and to protect certain species. The Convention obligates the parties to prohibit and

	regulate trade in specimens and trophies of protected species.
The World Heritage Convention, 1972	The principal objective of the World Heritage Convention is to protect objects of cultural and natural heritage, which are of value to the present and future generations. “Natural heritage” includes natural features consisting of physical and biological formations or groups of such formations that are of outstanding universal value from an aesthetic and scientific point of view. The Convention urges parties to integrate the protection and conservation of natural and cultural heritage into national planning and development programmes. The Convention has established a ‘World Heritage List’ which includes sites from throughout the world. To date, Uganda has included two sites Rwenzori Mountains National Park and Bwindi Impenetrable National Park.
The Stockholm Declaration, 1972	Uganda is Party to the Stockholm Declaration that was adopted by the United Nations Conference on the Human Environment at Stockholm in 1972. The Conference increased awareness of the importance of conserving the environment and requires Parties to safeguard the natural resources of the earth (including flora and fauna and especially representative samples of specific ecosystems) for the benefits of present and future generations.
Bonn Convention, 1979	The Bonn Convention on the Conservation of Migratory Species of Wild Animals (CMS) recognises that the conservation and efficient management of migratory species of wild animals requires concerted efforts of all states within their national jurisdiction of which species spend part of their lives. The Uganda Wildlife Act provides for the protection of migratory species of wild animals which is in line with the Bonn Convention.
East African Community Protocol on Environment and Natural Resources.	This protocol obligates Uganda to sustainably conserve wildlife resources in partnership with the local communities. The protocol requires Uganda to cooperate in management of trans boundary wildlife resources, promoting of social and economic incentives for conservation and to conclude agreements aimed at conserving trans boundary wildlife resources.
The Convention on Wetlands of International Importance Especially as Waterfowl Habitats, 1975	This convention recognizes the fundamental ecological functions of wetlands as regulators of water regimes and habitats characteristic flora and fauna especially waterfowl and that wetlands constitute a resource of great economic, cultural, scientific and recreational value and that their loss would constitute an irreparable loss. Since in their seasonal migrations waterfowls transcend international boundaries they are under this Convention considered an international resource. The waters of River Nile are natural flowing waters with marshes in many areas. They form part of water bodies on which waterfowls are ecologically dependent. Uganda as a party member to this convention is under an obligation to prepare a List of Wetlands of International Importance that attract waterfowls in their

		immigration.
The Nile Basin Cooperation Framework Agreement, 2010 (Replacing the Colonial era Nile Protocols of 1929 and 1959)		This Framework Agreement between the Nile Basin Countries is designed to regulate the equitable use of the Nile Waters amongst those countries. This use was previously determined by a number of colonial agreements that leaned heavily in favor of Egypt (which has not yet signed this Agreement) that together with Sudan would have a 90% water use allocation of the Nile waters. The Framework Agreement creates a permanent commission to manage the Nile Waters and Guarantee an equitable allocation of its resources.
United Nations Framework Convention on Climate Change 1992		Article 4 (f) related to impact assessment to avoid or mitigate or adapt to climate change;

Appendix 5: Resettlement Policies and Entitlement Matrix

A. Resettlement Policies for IHPP Stipulated in the IHPP RAP Report

- Replacement of acquired physical assets (land and structure) will be the preferred compensation option
- The APs preferring cash compensation will be compensated at full replacement cost for their lost assets, incomes and businesses, including temporary losses or impacts, without adjustments for depreciation.
- Lack of formal property ownership documents or title deed or use agreement will not bar for compensation of lost assets
- Resettlement and rehabilitation assistance will be provided to the APs in general and particularly to the vulnerable APs (Female Headed, Child Headed, Elderly, Handicapped etc) to restore their pre-project incomes and standards of living.
- All APs will be treated equally irrespective of their ethnicity, gender, age, and vulnerability in the compensation of lost assets.
- Costs for transfer of property will be waived or borne by the project, including taxes, fees, documentation and court appeals.

In compliance to the above policy and principles and based on the consultation with APs, IHPP RAP had designed two modalities of resettlement and rehabilitation packages:

Modality 1: Primary Entitlement Measures: This modality is targeted to APs preferring Cash Compensation for the acquired physical assets, crops, and trees. APs under this modality are also entitled cash compensation for relocation/rehabilitation assistance. Cash compensation of graves and relocation including transportation will be provided as per the district rates based on distance of relocation. Apart from above all charges such as taxes, documentation and court appeals for property transfer and new property purchase will be paid by the project.

Modality 2: Other Entitlement Measures (vulnerable groups): This modality targets the APs preferring replacement of physical assets and vulnerable groups. Cash compensation to the lost physical assets will not be provided, however, cash compensation for crops, trees, and relocation/rehabilitation and graves will be as per the Modality 1.

The APs (Landlords/ Legal Title Holders, Kibanja Owners, State/ Local Government Institutions, Illegal Users (Squatters), Tenants, Workers in Businesses) depending upon the rights established are entitled for the following losses.

- Loss of land
- Loss of perennial crops
- Loss of annual (seasonal) crops
- Loss of permanent structure (residence, business, or other structures such as agriculture shed, fencing, latrine)
- Loss of temporary structure (e.g. agricultural structure, latrines, fence etc)
- Loss of business
- Loss of employment
- Displacement of graves, physical cultural resources or cultural sites
- Payment of banking fees

B. Entitlement Matrix stipulated in the IHPP RAP Report

	CATEGORY	ENTITLED PERSON	Modality 1: PRIMARY ENTITLEMENT MEASURES	Modality 2: OTHER ENTITLEMENT MEASURES (FOR VULNERABLE GROUPS AND FAMILIES)
1	Loss of land	<ul style="list-style-type: none"> • Landlords/ legal title holders • Kibanja owners • State/ local government Institutions (various) 	<ul style="list-style-type: none"> • For households who can continue current land use (on adjacent land): Cash compensation based on government rates (equal to replacement value). • Disturbance allowance (15%). • Relocation assistance on a case by case basis. 	<ul style="list-style-type: none"> • For households who will lose all their land, or for those who can't continue current activities on remaining land: Cash compensation based on government rates (equal to replacement value) OR replacement land of similar size, quality and tenure OR assistance from the project to identify new site. • Security of tenure: where land for land options are chosen by households, similar tenure will be provided (i.e. kibanja ownership, or mailo ownership papers). • Relocation assistance in cash or services on a case-by-case basis as is sought.
2	Loss of perennial crops	<ul style="list-style-type: none"> • Landlords/ legal title holders • Kibanja owners • Illegal users (squatters) 	<ul style="list-style-type: none"> • Compensation of perennial crops at district rates (replacement value). 	As for Modality 1

	CATEGORY	ENTITLED PERSON	Modality 1: PRIMARY ENTITLEMENT MEASURES	Modality 2: OTHER ENTITLEMENT MEASURES (FOR VULNERABLE GROUPS AND FAMILIES)
3	Loss of annual (seasonal) crops	<ul style="list-style-type: none"> Landlords/ legal title holders Kibanja owners 	<ul style="list-style-type: none"> Timing of project to enable the harvesting of annual (seasonal) crops. Transitional allowance of 5% of value of crops per household which loses perennial crops to cover for income loss. 	As for Modality 1
4	Loss of permanent structure (residence, business, or other structures such as agriculture shed, fencing, latrine)	<ul style="list-style-type: none"> Landlords/ legal title holders Kibanja owners 	<ul style="list-style-type: none"> Compensation at government rates, disturbance allowance and top up equal to inflation for increase in cost of construction materials (equal to replacement cost). Assistance in the procurement of construction materials. Building materials maybe salvaged from old housing to be utilised in new structures (transport at owner’s cost). For those moving to a new settlement, or non-adjacent land, transport assistance to move households or business goods. 	<ul style="list-style-type: none"> Construction of replacement permanent structure For those moving to a new settlement, or non-adjacent land, transport and labor assistance to move households or business goods. For those moving to adjacent land, labor to move household of business good, determined on a case by case basis. Building materials maybe salvaged from old housing (transport at their own cost).
		<ul style="list-style-type: none"> Tenants (if any identified) 	<ul style="list-style-type: none"> Cash for fixed assets (if any, based on approved district rates). For those moving to non-adjacent land, transport assistance to move households or business goods. 	<ul style="list-style-type: none"> Cash for fixed assets (if any, based on approved district rates). Assistance to find alternative rental property (business or residence). Arrange formal lease with similar conditions to previous lease, and provide formal tenancy agreement.

	CATEGORY	ENTITLED PERSON	Modality 1: PRIMARY ENTITLEMENT MEASURES	Modality 2: OTHER ENTITLEMENT MEASURES (FOR VULNERABLE GROUPS AND FAMILIES)
5	Loss of temporary structure (e.g. agricultural structure, latrines, fence etc)	<ul style="list-style-type: none"> • Landlords/ legal title holders • Kibanja owners • Tenants 	<ul style="list-style-type: none"> • Compensation at government rates, disturbance allowance and top up equal to inflation for increase in cost of construction materials (equal to replacement cost). • Assistance in the procurement of construction materials. • Building materials maybe salvaged from old housing (transport at their own cost). • For those moving to a new settlement, or non-adjacent land, transport assistance to move households or business goods. 	<ul style="list-style-type: none"> • Construction of replacement permanent structure • For those moving to a new settlement, or non-adjacent land, transport and labor assistance to move households or business goods. • For those moving to adjacent land, labor to move household of business good, on a case by case basis. • Building materials maybe salvaged from old housing (transport at their own cost).
6	Loss of business	<ul style="list-style-type: none"> • Landlords/ legal title holders • Kibanja owners • Tenants 	<ul style="list-style-type: none"> • For those moving to a new settlement, or non-adjacent land, transport assistance to move business goods. • Transition allowance equal to 50% of the average income for one month. 	As for Modality 1
7	Loss of employment	<ul style="list-style-type: none"> • Workers in businesses 	<ul style="list-style-type: none"> • Ensure the transfer of employment-monitor • Transitional allowance equal to UgShs 270,000 (equal 3 months' pay at average monthly wage of UgShs 90,000). 	As for Modality 1

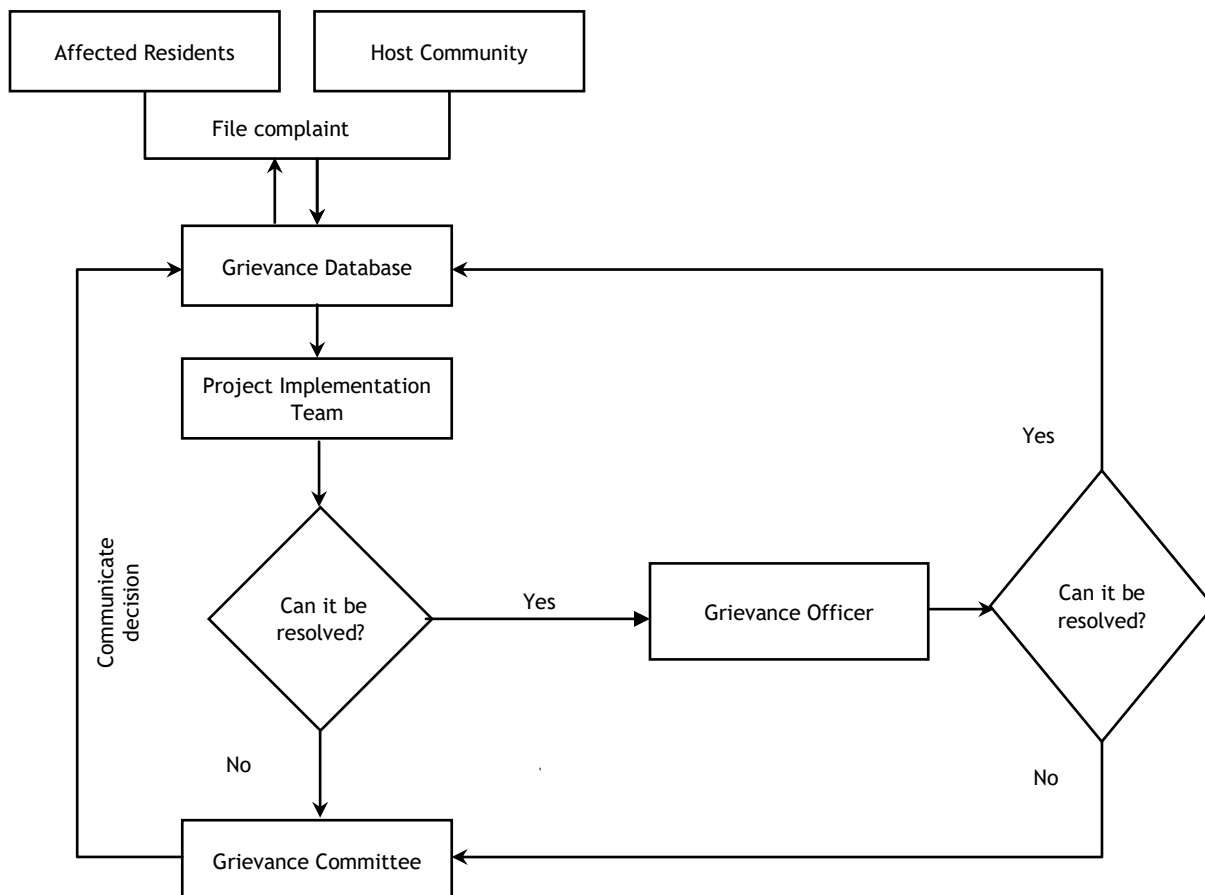
Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

	CATEGORY	ENTITLED PERSON	Modality 1: PRIMARY ENTITLEMENT MEASURES	Modality 2: OTHER ENTITLEMENT MEASURES (FOR VULNERABLE GROUPS AND FAMILIES)
8	Displacement of graves, physical cultural resources or cultural sites		<ul style="list-style-type: none"> • Compensation as per approved district rates. • Provide transport assistance. • Provide financial assistance for rituals / ceremonies involved in relocation of cultural resources. 	As for Modality 1
9	Payment of banking fees	<ul style="list-style-type: none"> • Landlords/ legal title holders • Kibanja owners • Tenants 	<ul style="list-style-type: none"> • Opening of bank accounts: All households who do not currently have a bank account will be required to open up a bank account because it is a policy to pay PAPs in the bank as opposed to cash. 	As for Modality 1

Appendix 6: Grievance Management stipulated in the IHPP RAP Report

A grievance committee is envisaged to be constituted at sub-county level in local government areas affected by the project foot print. The committee comprising members from the project proponent (UGCL/UTCL), Local Leaders, and representation from local NGOs is trusted for grievance management. The grievances received through written or verbal communication from APs or through the implementation and monitoring units and contractors shall be documentation by the Grievance Officer (designated staff of UGCL/UTCL for grievance recording and communication) with dates, name and address of the complainer. The Grievance Officer will communicate and discuss the grievance with the respective responsible management authority/working groups for solutions. The grievance and related solution will be pass to the Grievance committee decisions. The decisions of the Grievance committee on the grievance will be communicated within 2 weeks to the complainer. The overall mechanism of the grievance redress as envisaged in the RAP is depicted in **Figure 1**

Figure 1: Grievance Redress Mechanism



Appendix 7: Floral Diversity of KFS (Source IHPP EIA 2014)⁵¹

Grass

Family	Species	IUCN Redlist 2016
Poaceae	<i>Chloris pycnothrix</i>	NL
Poaceae	<i>Cynodon dactylon</i>	NL
Poaceae	<i>Digitaria abyssinica</i>	NL
Poaceae	<i>Digitaria velutina</i>	NL
Poaceae	<i>Echinochloa pyramidalis</i>	LC
Poaceae	<i>Eleusine africana</i>	NL
Poaceae	<i>Eleusine indica</i>	LC
Poaceae	<i>Eragrostis exasperata</i>	NL
Poaceae	<i>Eragrostis tenuifolia</i>	NL
Poaceae	<i>Imperata cylindrica</i>	NL
Poaceae	<i>Leersia hexandra</i>	NL
Poaceae	<i>Melinis repens</i>	NL
Poaceae	<i>Oryza sativa</i>	NL
Poaceae	<i>Panicum chionachne</i>	NL
Poaceae	<i>Panicum deustum</i>	NL
Poaceae	<i>Panicum maximum</i>	NL
Poaceae	<i>Paspalidum scrobiculatum</i>	NL
Poaceae	<i>Pennisetum purpureum</i>	NL
Poaceae	<i>Phragmites mauritianus</i>	NL
Poaceae	<i>Rottboellia cochinchinensis</i>	NL
Poaceae	<i>Saccharaum officinale</i>	NL
Poaceae	<i>Setaria sphacelata</i>	NL
Poaceae	<i>Sorghum arundinaceum</i>	NL
Poaceae	<i>Sporobolus pyramidalis</i>	NL
Poaceae	<i>Vossia cuspidata</i>	NL
Poaceae	<i>Zea mays</i>	NL

Note: NL= Not Listed, LC= Least Concerned

Herbs

Family	Species	IUCN Red List 2016
Acanthaceae	<i>Asystasia gangetica</i>	NL

⁵¹ KAGGA & PARTNERS LTD; FITCHNER GmbH & Co. KG and NORPLAN AS, 2014. Environmental Impact Assessment for the proposed Isimba Hydropower Plant and Reservoir

Family	Species	IUCN Red List 2016
Acanthaceae	<i>Barleria ventricosa</i>	NL
Acanthaceae	<i>Dicliptera laxata</i>	NL
Acanthaceae	<i>Dyschoriste radicans</i>	NL
Acanthaceae	<i>Hygrophilla uliginosa</i>	NL
Acanthaceae	<i>Justicia exigua</i>	NL
Acanthaceae	<i>Justicia flava</i>	NL
Acanthaceae	<i>Ruellia prostrata</i>	NL
Amaranthaceae	<i>Achyranthes aspera</i>	NL
Amaranthaceae	<i>Amaranthus dubius</i>	NL
Amaranthaceae	<i>Celosia anthelminthica</i>	NL
Apiaceae	<i>Centella asiatica</i>	LC
Araceae	<i>Colocasia esculenta</i>	LC
Araceae	<i>Pistia stratiotes</i>	LC
Asteraceae	<i>Acanthospermum hispidum</i>	NL
Asteraceae	<i>Acmella oleracea</i>	NL
Asteraceae	<i>Ageratum conyzoides</i>	NL
Asteraceae	<i>Bidens pilosa</i>	NL
Asteraceae	<i>Conyza sumatrensis</i>	NL
Asteraceae	<i>Crassocephalum cecropioides</i>	NL
Asteraceae	<i>Crassocephalum vitellinum</i>	NL
Asteraceae	<i>Dichrocephala integrifolia</i>	NL
Asteraceae	<i>Eclipta alba</i>	DD (Data Deficient)
Asteraceae	<i>Emilia discifolia</i>	NL
Asteraceae	<i>Ethulia conyzoides</i>	LC
Asteraceae	<i>Galinsoga parvifolia</i>	NL
Asteraceae	<i>Melanthera scandes</i>	NL
Asteraceae	<i>Pluchea discorides</i>	NL
Asteraceae	<i>Sigesbeckia orientalis</i>	NL
Asteraceae	<i>Synedrella nodiflora</i>	NL
Asteraceae	<i>Tridax procumbens</i>	NL
Balsaminaceae	<i>Impatiens sp.</i>	NL
Brassicaceae	<i>Erucastrum arabicum</i>	NL
Commelinaceae	<i>Commelina benghalensis</i>	LC
Commelinaceae	<i>Cyanotis foecunda</i>	NL
Convolvulaceae	<i>Ipomoea aquatica</i>	LC
Cyperaceae	<i>Cyperus articulatus</i>	LC
Cyperaceae	<i>Cyperus cyperoides</i>	LC

Family	Species	IUCN Red List 2016
Cyperaceae	<i>Cyperus denudatus</i>	NL
Cyperaceae	<i>Cyperus difformis</i>	LC
Cyperaceae	<i>Cyperus distans</i>	LC
Cyperaceae	<i>Cyperus dives</i>	NL
Cyperaceae	<i>Cyperus latifolius</i>	NL
Cyperaceae	<i>Cyperus papyrus</i>	LC
Cyperaceae	<i>Fuirena umbellata</i>	LC
Cyperaceae	<i>Kyllinga elatior</i>	NL
Dracaenaceae	<i>Sansevieria dawei</i>	NL
Euphorbiaceae	<i>Euphorbia crotonoides</i>	NL
Euphorbiaceae	<i>Euphorbia hirta</i>	NL
Euphorbiaceae	<i>Tragia brevipes</i>	NL
Fabaceae (Caesalpinoideae)	<i>Chamaecrista mimosoides</i>	NL
Fabaceae (Caesalpinoideae)	<i>Senna hirsuta</i>	NL
Fabaceae (Caesalpinoideae)	<i>Senna obtusifolia</i>	NL
Fabaceae (Caesalpinoideae)	<i>Senna occidentalis</i>	NL
Fabaceae (Mimosoideae)	<i>Mimosa pudica</i>	LC
Fabaceae (Papilionoideae)	<i>Aeschynomene indica</i>	LC
Fabaceae (Papilionoideae)	<i>Crotalaria incana</i> ssp. <i>purpurascens</i>	NL
Fabaceae (Papilionoideae)	<i>Crotalaria spinosa</i>	NL
Fabaceae (Papilionoideae)	<i>Desmodium adscendens</i>	LC
Fabaceae (Papilionoideae)	<i>Desmodium canum</i>	NL
Fabaceae (Papilionoideae)	<i>Desmodium ramossissimum</i>	NL
fabaceae (Papilionoideae)	<i>Desmodium salicifolium</i>	LC
Fabaceae (Papilionoideae)	<i>Desmodium tortuosum</i>	NL
Fabaceae (Papilionoideae)	<i>Desmodium velutinum</i>	NL
Fabaceae (Papilionoideae)	<i>Indigofera hirsuta</i>	NL
Lamiaceae	<i>Leonotis nepetifolia</i>	NL
Lamiaceae	<i>Leucas martinicensis</i>	NL
Malvaceae	<i>Abutilon mauritianum</i>	NL
Malvaceae	<i>Kosteletzkya adoensis</i>	NL
Malvaceae	<i>Sida acuta</i>	NL
Malvaceae	<i>Sida rhombifolia</i>	NL
Musaceae	<i>Musa</i> sp.	NL
Nyctaginaceae	<i>Boerhavia coccinea</i>	NL
Nyctaginaceae	<i>Commicarpus</i> sp.	NL
Onagraceae	<i>Jussiaea leptocarpa</i>	NL

Family	Species	IUCN Red List 2016
Onagraceae	<i>Ludwigia abyssinica</i>	NL
Oxalidaceae	<i>Oxalis latifolia</i>	NL
Phyllanthaceae	<i>Phyllanthus pseudoniruri</i>	NL
Polygonaceae	<i>Oxygonum sinuatum</i>	NL
Polygonaceae	<i>Persicaria setosula</i>	NL
Pontederiaceae	<i>Eichhornia crassipes</i>	NL
Rubiaceae	<i>Spermacoce princeae</i>	NL
Solanaceae	<i>Physalis minima</i>	NL
Tiliaceae	<i>Corchorus olitorius</i>	NL
Tiliaceae	<i>Triumfetta rhomboidea</i>	NL
Typhaceae	<i>Typha domingensis</i>	LC
Typhaceae	<i>Typha latifolia</i>	LC
Zingiberaceae	<i>Aframomum angustifolium</i>	LC

Note: NL= Not Listed, LC= Least Concerned, V= Vulnerable, DD = Data Deficient , LR/NT = Low Risk/ Near Threatened

Climbers

Family	Species	IUCN Red list , 2016
Acanthaceae	<i>Thunbergia alata</i>	NL
Aristolochiaceae	<i>Aristolochia elegans</i>	NL
Basellaceae	<i>Basella alba</i>	NL
Convolvulaceae	<i>Ipomoea cairica</i>	NL
Convolvulaceae	<i>Ipomoea hederifolia</i>	NL
Convolvulaceae	<i>Ipomoea rubens</i>	NL
Convolvulaceae	<i>Lepistemon owariensis</i>	NL
Convolvulaceae	<i>Merremia pterygocaulos</i>	NL
Cucurbitaceae	<i>Diplocyclos palmatus</i>	NL
Cucurbitaceae	<i>Momordica foetida</i>	NL
Cucurbitaceae	<i>Mukia maderaspatana</i>	NL
Fabaceae (Caesalpinoideae)	<i>Tylosema fassoglensis</i>	NL
Fabaceae (Papilionoideae)	<i>Teramnus labialis</i>	NL
Menispermaceae	<i>Cissampelos mucronata</i>	NL
Sapindaceae	<i>Cardiospermum grandiflorum</i>	NL
Vitaceae	<i>Cissus quadrangularis</i>	NL
Vitaceae	<i>Cissus rotundifolia</i>	NL
Vitaceae	<i>Cyphostemma adenocaula</i>	NL
Malvaceae	<i>Abrus precatorius</i>	NL

Note: NL= Not Listed, LC= Least Concerned, V= Vulnerable, DD = Data Deficient , LR/NT = Low Risk/ Near Threatened

Shrubs

Family	Species	IUCN Red list, 2016
Anacardiaceae	<i>Rhus vulgaris</i>	NL
Apocynaceae	<i>Landolphia buchananii</i>	NL
Asteraceae	<i>Microglossa pyrifolia</i>	NL
Asteraceae	<i>Vernonia amygdalina</i>	NL
Capparaceae	<i>Capparis fascicularis</i>	NL
Euphorbiaceae	<i>Acalypha bipartita</i>	NL
Euphorbiaceae	<i>Erythrococca bongensis</i>	NL
Fabaceae (Mimosoideae)	<i>Mimosa pigra</i>	NL
Fabaceae (Papilionoideae)	<i>Indigofera arrecta</i>	NL
Fabaceae (Papilionoideae)	<i>Sesbania sesban</i>	NL
Lamiaceae	<i>Hoslundia opposita</i>	NL
Lamiaceae	<i>Clerodendrum rotundifolium</i>	NL
Malvaceae	<i>Hibiscus calyphyllus</i>	NL
Malvaceae	<i>Hibiscus diversifolius</i>	NL
Malvaceae	<i>Urena lobata</i>	NL
Myrtaceae	<i>Psidium guajava</i>	NL
Phyllanthaceae	<i>Flueggea virosa</i>	NL
Phyllanthaceae	<i>Phyllanthus ovalifolius</i>	NL
Rubiaceae	<i>Pseudomussaenda erythrophylla</i>	NL
Scrophulariaceae	<i>Stachytarpheta urticifolia</i>	NL
Solanaceae	<i>Solanum incanum</i>	NL
Solanaceae	<i>Solanum macrocarpon</i>	NL
Tiliaceae	<i>Triumfetta macrophylla</i>	NL
Verbenaceae	<i>Lantana camara</i>	NL
Verbenaceae	<i>Lantana trifolia</i>	NL

Note: NL= Not Listed, LC= Least Concerned, V= Vulnerable, DD = Data Deficient , LR/NT = Low Risk/ Near Threatened

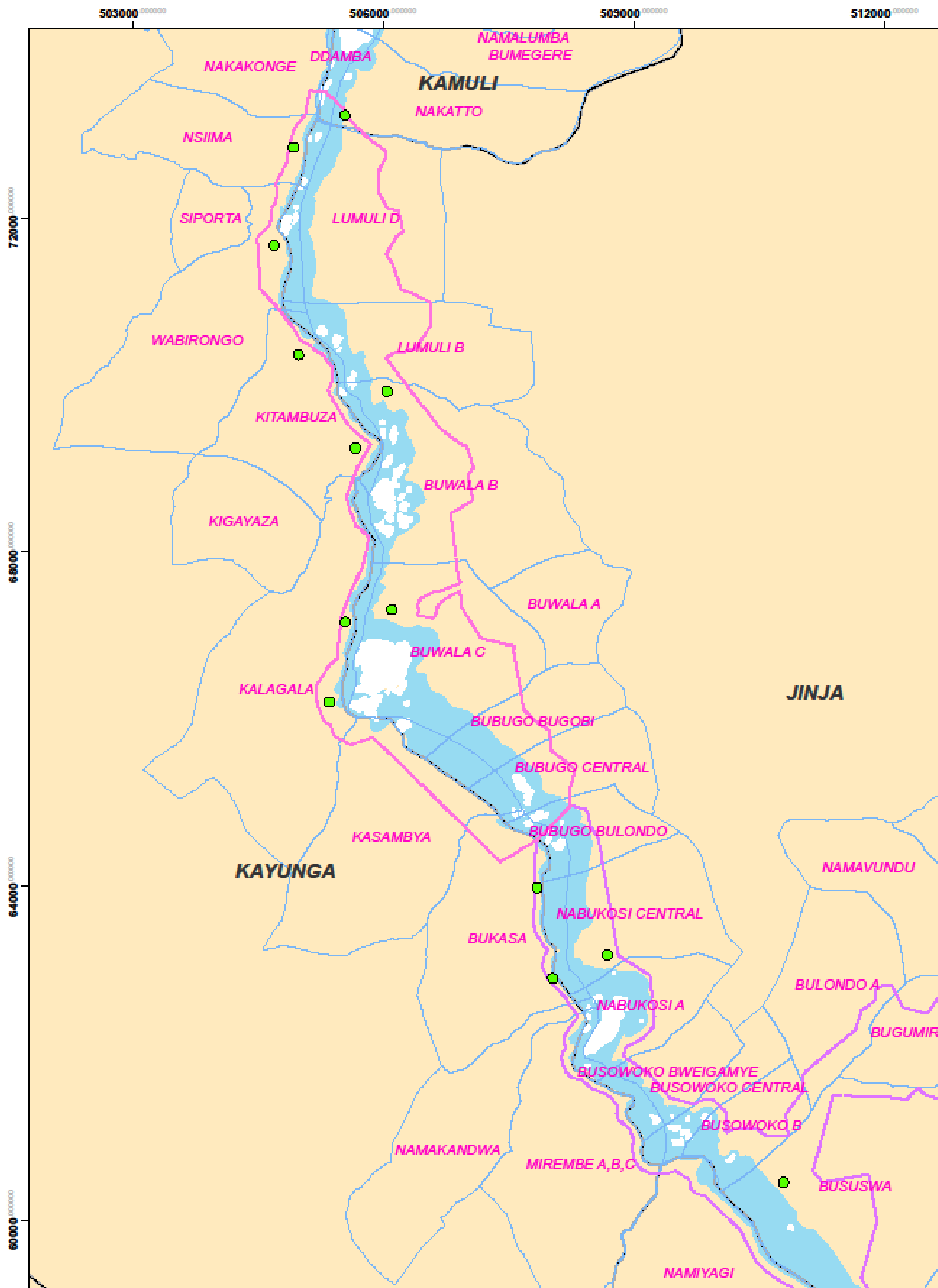
Trees

Family	Species	IUCN Red list, 2016
Anacardiaceae	<i>Mangifera indica</i>	DD (Data Deficient)
Anacardiaceae	<i>Pseudospondias microcarpa</i>	NL
Anacardiaceae	<i>Rhus natalensis</i>	NL
Arecaceae	<i>Phoenix reclinata</i>	NL
Bignoniaceae	<i>Markhamia lutea</i>	NL
Bignoniaceae	<i>Spathodea campanulata</i>	NL
Celastraceae	<i>Maytenus undata</i>	NL
Dracaenaceae	<i>Dracaena steudneri</i>	NL

Family	Species	IUCN Red list, 2016
Erythroxylaceae	<i>Erythroxylum fischeri</i>	NL
Euphorbiaceae	<i>Alchornea cordifolia</i>	NL
Euphorbiaceae	<i>Euphorbia candelabrum</i>	NL
Euphorbiaceae	<i>Manihot esculentum</i>	NL
Euphorbiaceae	<i>Ricinus communis</i>	NL
Euphorbiaceae	<i>Shirakiopsis elliptica</i>	NL
Fabaceae (Caesalpinoideae)	<i>Senna spectabilis</i>	LC
Fabaceae (Mimosoideae)	<i>Acacia polyacantha subsp. campylacantha</i>	NL
Fabaceae (Mimosoideae)	<i>Albizia coriaria</i>	NL
Fabaceae (Mimosoideae)	<i>Albizia grandibracteata</i>	NL
Fabaceae (Papilionoideae)	<i>Aeschynomene elaphroxylon</i>	NL
Lauraceae	<i>Persea americana</i>	NL
Moraceae	<i>Antiaris toxicaria</i>	NL
Moraceae	<i>Artocarpus heterophyllus</i>	NL
Moraceae	<i>Ficus exaserata</i>	NL
Moraceae	<i>Ficus natalensis</i>	NL
Moraceae	<i>Ficus ovata</i>	NL
Moraceae	<i>Ficus sp.</i>	NL
Moraceae	<i>Ficus sycomorus</i>	NL
Moraceae	<i>Ficus vallis-choudae</i>	NL
Moraceae	<i>Milicia excelsa</i>	LR/ NT (Lower Risk/near threatened)
Myrtaceae	<i>Eucalyptus sp.</i>	NL
Phyllanthaceae	<i>Bridelia micrantha</i>	NL
Rhamnaceae	<i>Maesopsis eminii</i>	NL
Rubiaceae	<i>Coffea robusta</i>	NL
Rutaceae	<i>Citrus sinensis</i>	NL
Rutaceae	<i>Clausena anisata</i>	NL
Rutaceae	<i>Vepris nobilis</i>	NL
Sapindaceae	<i>Blighia unijugata</i>	NL
Sterculiaceae	<i>Broussonetia papyrifera</i>	NL
Tiliaceae	<i>Grewia similis</i>	NL

Note: NL= Not Listed, LC= Least Concerned, V= Vulnerable, DD = Data Deficient , LR/NT = Low Risk/ Near Threatened

Vegetation Survey Locations - KFS and KFS Extension A



Appendix 8: Bird Diversity KFS

ATLAS NO	SPECIES NAME	Habitat & IUCN status Spp Code	Sites Surveyed		
			Buwala	Kitambuza	Kalagala
6	LONG-TAILED CORMORANT <i>Phalacrocorax africanus</i> 17	W	2	1	0
17	CATTLE EGRET <i>Bubulcus ibis</i> 32	G	3	15	30
21	LITTLE EGRET <i>Egretta garzetta</i> 36	W	5	5	0
25	GREY HERON <i>Ardea cinerea</i> 25	R-NT,W	0	0	1
30	AFRICAN OPEN-BILLED STORK <i>Anastomus lamelligerus</i> 43	A,w,G	1	1	10
39	HADADA IBIS <i>Bostrychia hagedash</i> 51	w	2	1	2
42	SACRED IBIS <i>Threskiornis aethiopica</i> 54	W	0	5	0
76	AFRICAN FISH EAGLE <i>Haliaeetus vocifer</i> 137	W	1	0	0
77	PALM-NUT VULTURE <i>Gypohierax angolensis</i> 84		0	5	0
109	LIZARD BUZZARD <i>Kaupifalco monogrammicus</i> 129	f	4	0	0
122	LONG-CRESTED EAGLE <i>Lophaetus occipitalis</i> 130	f	0	0	3
142	HELMETED GUINEAFOWL <i>Numida meleagris</i> 190	G	6	0	0
178	BLACK CRAKE <i>Amaurornis flavirostris</i> 201	W	5	0	0
270	TAMBOURINE DOVE <i>Turtur tympanistria</i> 357	F	0	3	0
271	BLUE-SPOTTED WOOD DOVE <i>Turtur afer</i> 355	f	6	0	6
283	RED-EYED DOVE <i>Streptopelia semitorquata</i> 350	f	0	4	0
289	LAUGHING DOVE <i>Streptopelia senegalensis</i> 351		6	0	0
293	RED-HEADED LOVEBIRD <i>Agapornis pullaria</i> 363	f	0	5	0
305	EASTERN GREY PLANTAIN EATER <i>Crinifer zonurus</i> 376		0	0	5
320	DIDRIC CUCKOO <i>Chrysococcyx caprius</i> 388		3	0	0
323	WHITE-BROWED COUCAL <i>Centropus superciliosus</i> 406		5	0	0
375	WOODLAND KINGFISHER <i>Halcyon senegalensis</i> 475	A	6	6	6
383	PIED KINGFISHER <i>Ceryle rudis</i> 465	W	5	4	0

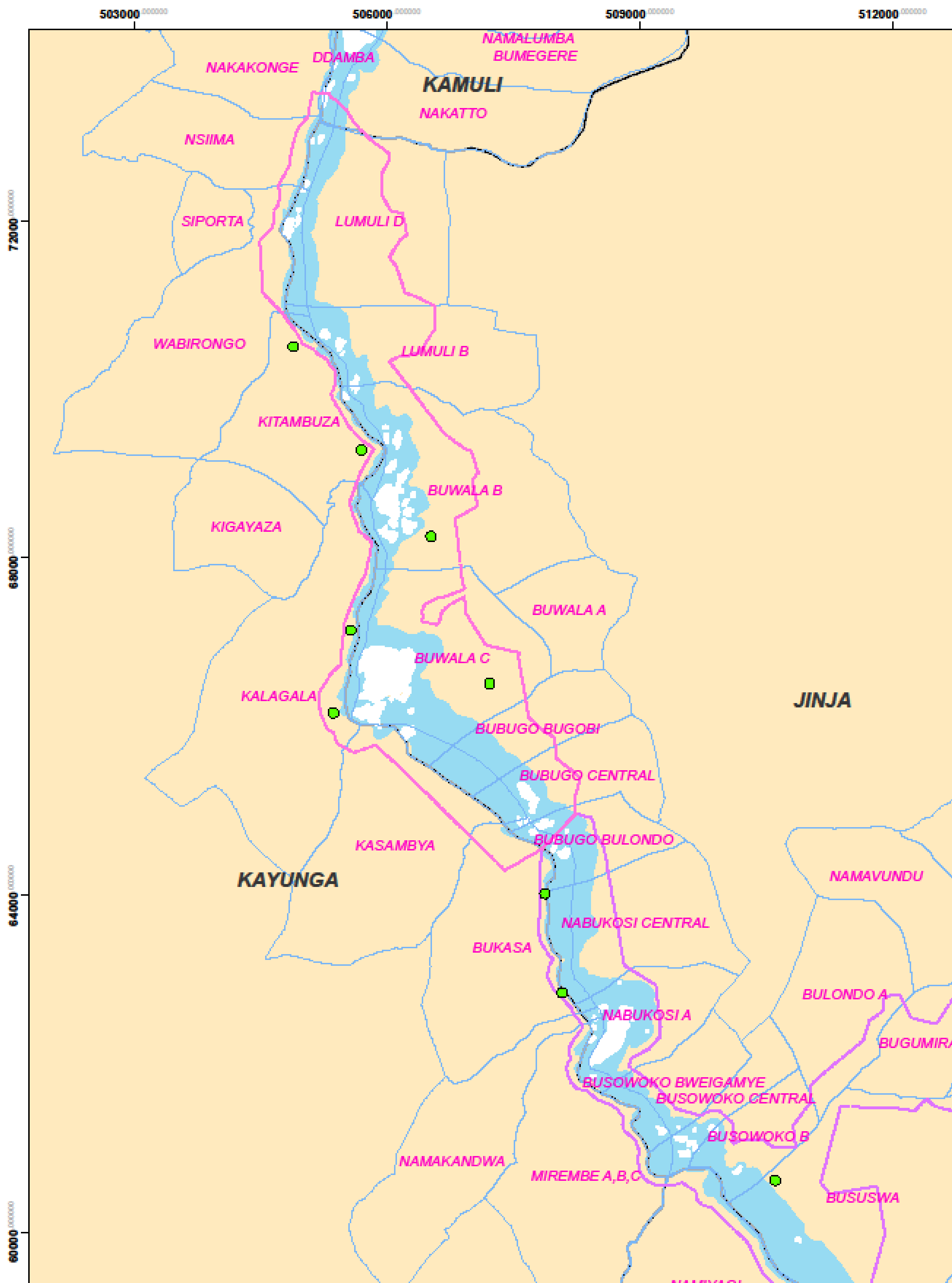
ATLAS NO	SPECIES NAME	Habitat & IUCN status Spp Code	Sites Surveyed		
			Buwala	Kitambuza	Kalagala
390	WHITE-THROATED BEE-EATER <i>Merops albicollis</i> 479	A,f,Ae	0	0	3
419	CROWNED HORNBILL <i>Tockus alboterminatus</i> 515	f	0	0	5
512	ANGOLA SWALLOW <i>Hirundo angolensis</i> 627	w,Ae	6	5	0
538	LITTLE GREENBUL <i>Andropadus virens</i> 705	F	0	5	6
562	COMMON BULBUL <i>Pycnonotus barbatus</i> 732	f	3	6	3
576	WHITE-BROWED ROBIN-CHAT <i>Cossypha heuglini</i> 751	f	6	0	0
588	BROWN-BACKED SCRUB-ROBIN <i>Cercotrichas hartlaubi</i> 743	f	2	0	0
612	AFRICAN THRUSH <i>Turdus pelios</i> 801	f	2	0	0
621	AFRICAN MOUSTACHED WARBLER <i>Melocichla mentalis</i> 915		6	0	0
637	ICTERINE WARBLER <i>Hippolais icterina</i> 885	P	0	6	0
638	RED-FACED CISTICOLA <i>Cisticola erythrops</i> 857	w	0	0	4
641	TRILLING CISTICOLA <i>Cisticola woosnami</i> 873		1	0	0
647	WINDING CISTICOLA <i>Cisticola galactotes</i> 860	w	0	5	0
658	TAWNY-FLANKED PRINIA <i>Prinia subflava</i> 913	f,w	6	6	6
662	WHITE-CHINNED PRINIA <i>Schistolais leucopogon</i> 911	F	0	0	3
713	NORTHERN BLACK FLYCATCHER <i>Melaenornis edoliodides</i> 934		0	6	0
781	GREEN-HEADED SUNBIRD <i>Cyanomitra verticalis</i> 1130	F	0	0	2
787	SCARLET-CHESTED SUNBIRD <i>Chalcomitra senegalensis</i> 1122	f	1	4	0
811	YELLOW WHITE-EYE <i>Zosterops senegalensis</i> 1133	f	0	5	0
843	BLACK-HEADED GONOLEK <i>Laniarius erythrogaster</i> 1003	f	6	5	0
841	TROPICAL BOUBOU <i>Laniarius aethiopicus</i> 1004	f	6	0	0
871	SPLENDID STARLING <i>Lamprotornis splendidus</i> 1061		0	6	10

ATLAS NO	SPECIES NAME	Habitat & IUCN status Spp Code	Sites Surveyed		
			Buwala	Kitambuza	Kalagala
872	RUPPELL'S LONG-TAILED STARLING <i>Lamprotornis purpuropter</i> 1060	F	2	30	4
876	VIOLET-BACKED STARLING <i>Cinnyricinclus leucogaster</i> 1048	R-NT,FF	0	3	2
881	GREY-HEADED SPARROW <i>Passer griseus</i> 1206	R-RR	0	1	4
908	BLACK-HEADED WEAVER <i>Ploceus cucullatus</i> 1165	f	0	10	0
959	RED-BILLED FIREFINCH <i>Lagonosticta senegala</i> 1241	R-NT,f	3	0	0
970	BLACK-CROWNED WAXBILL <i>Estrilda nonnula</i> 1230	w,G	0	6	0
974	RED-CHEEKED CORDON-BLEU <i>Uraeginthus bengalus</i> 1261		3	6	0
980	BRONZE MANNIKIN <i>Lonchura cucullata</i> 1266	G	7	4	10
985	PIN-TAILED WHYDAH <i>Vidua macroura</i> 1216		6	6	0

Note: Note: Data Source , Consultant's Survey 2016, September

Threat categories		Habitat Codes	
G-CR	globally critical	A	Afrotropical migrant – a species migrating within Africa
G-EN	globally endangered	P	Palaearctic migrant - species which breed in Europe or Asia
G-VU	globally vulnerable	p-	Species with at least some palaearctic populations
G-LR/nt	globally lower-risk, near threatened	FF	Forest specialist – species typical of forest interiors
G-DD	globally data deficient	G	Grassland species
G-RR	globally range-restricted	F	Forest generalist – less specialized, also occur in small patches of forest
R-CR	regionally critical	f-	Forest visitor
R-EN	regionally endangered	W	Water bird, specialist – normally restricted to wetlands or open waters
R-VU	regionally vulnerable	w-	Water bird, no-specialist – often found near water
R-NT	regionally near-threatened		
R-RR	species of regional responsibility		

Birds Observation and Sampling Sites KFS and KFS Extens



Appendix 9: Butter Fly Species - KFS

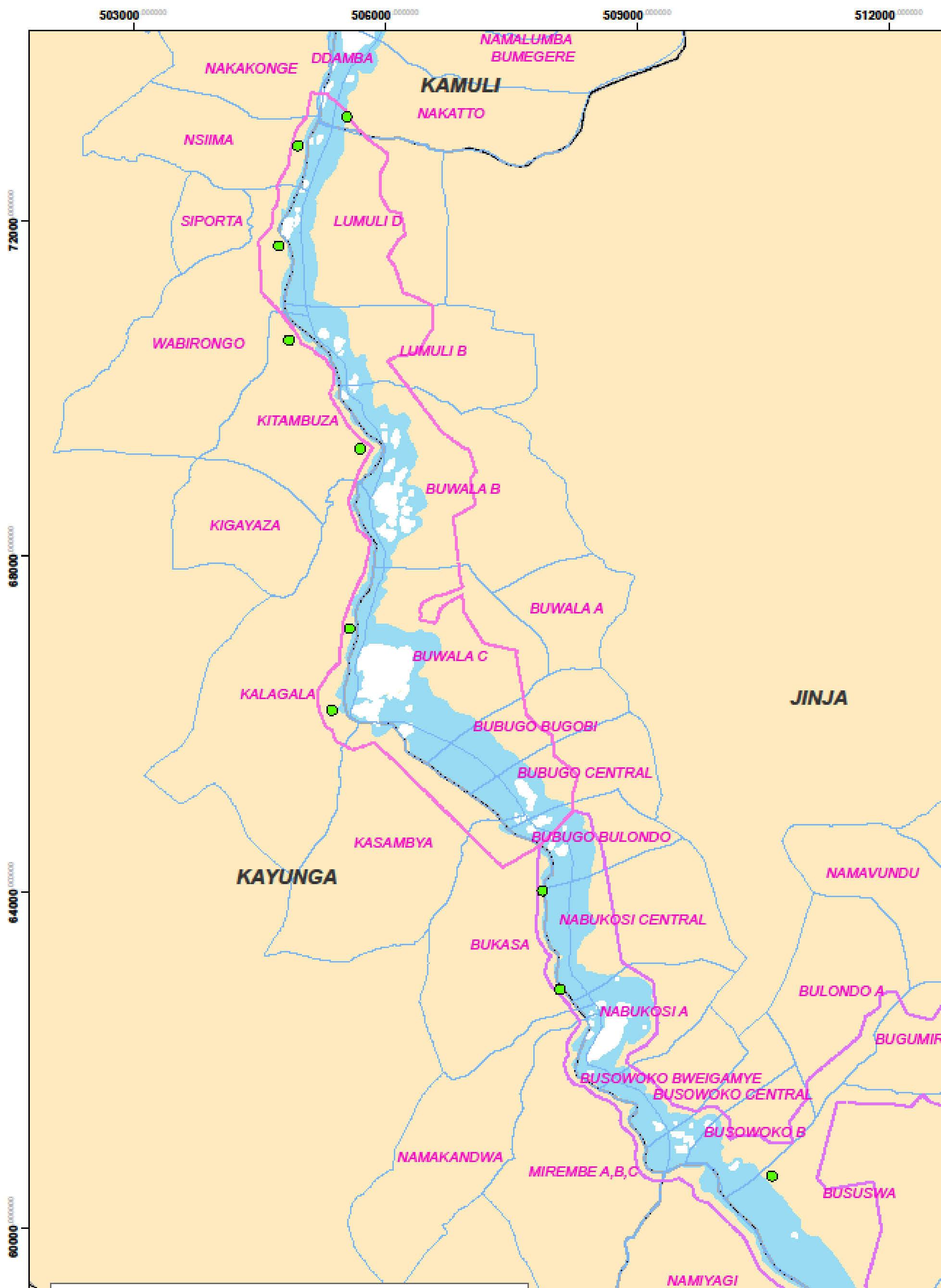
Species	Ecotype	Kitambuza	Kalagala	Nakatoke
<i>Acraea alicia</i>	W	1	1	
<i>Acraea encedon</i>	W		1	
<i>Acraea eponina</i>	W	1		1
<i>Ariadne enotrea</i>	F		1	
<i>Belenois aurota</i>	M	1		
<i>Belenois creona</i>	M	1	1	1
<i>Belenois thysa</i>	f.		1	
<i>Bicyclus safitza</i>	W	1		
<i>Bicyclus vulgaris</i>	W	1		
<i>Byblia anvatara</i>	M			1
<i>Catopsilia florella</i>	M	1		
<i>Charaxes tiridates</i>	F		1	
<i>Charaxes varanes</i>	W		1	
<i>Colotis evippe</i>	W	1	1	1
<i>Danaus chrysippus</i>	M	1		1
<i>Dixeia pigea</i>	W		1	
<i>Eicochrysops hippocrates</i>	W			
<i>Eretis lugens</i>	W	1		
<i>Eronia cleodora</i>	O		1	
<i>Eurema brigitta</i>	M	1		1
<i>Eurema hecabe</i>	M		1	
<i>Hypolimnas misippus</i>	M		1	
<i>Hypolimnas salmacis</i>	F		1	
<i>Junonia chorimene</i>	O			
<i>Junonia oenone</i>	W	1		1
<i>Leptosia nupta</i>	F		1	
<i>Leptosia wigginsii</i>	F		1	
<i>Nepheronia argia</i>	F		1	
<i>Nepheronia thalassina</i>	f.		1	
<i>Neptis saclava</i>	W	1	1	1

Species	Ecotype	Kitambuza	Kalagala	Nakatoke
<i>Papilio dardanus</i>	W		1	
<i>Papilio demodocus</i>	M	1	1	1
<i>Pardaleodes incerta</i>	F		1	
<i>Zizeeria knysna</i>	W	1	1	
<i>Zizula hylax</i>	W	1	1	1
Total=35		16	23	10

Note: Data Source , Consultant's Survey 2016 -September

Forest dependent species (F), Forest edge/woodland species (f), Open habitat species (O), Widespread species (W), Migratory species (M), and Wetland species (S).

Mammals and Butterfly observation Sites KFS and KFS Extension



**Appendix 10: Fish Species of the Upper Victoria Nile, their Occurrence and Distribution over the Years and across the River
(Based on Previous Studies and Recent Surveys with Fisherman)**

Family Name	Species Name	Local Names	IUCN Redlist 2016	FIRRI 2000				NAFIRRI 2006				Fisher's Survey 2016		
				Makwanzi	Buyala to Kikuba -Mutwe	Matumu to Kirindi	Namasagali to Bunyamira	Makwanzi	Buyala to Kikuba -Mutwe	Matumu to Kirindi	Namasagali to Bunyamira	(Kikuba-Mutwe)	Itanda Falls	Kirindi
Bagridae	<i>Bagrus docmak</i>	Semutundu	LC									F	F	F
Centropomidae	<i>Lates niloticus</i>	Mputa	LC									F	F	F
Characidae	<i>Brycinus jacksonii</i>	Nsoga	E											
	<i>Brycinus. sadleri</i>	-	LC											
Cichlidae	<i>Oreochromis niloticus</i>	Tafu, Abuku	NYA									F	F	F
	<i>Oreochromis. leucostictus</i>	-	LC									F	R	R
	<i>Oreochromis. variabilis</i>	Mpongo	CE									R	R	R
	<i>Tilapia zillii</i>	Katerega	LC									F	R	R
	Haplochromines	Nkejje										C	C	C
Clariidae	<i>Clarias gariepinus</i>	Mmale	LC									F	R	R
Cyprinidae	<i>Barbus altianalis</i>	Kisinja, Nkukutu	LC									F	F	F

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Family Name	Species Name	Local Names	IUCN Redlist 2016	FIRRI 2000				NAFIRRI 2006				Fisher's Survey 2016		
				Makwanzi	Buyala to Kikuba -Mutwe	Matumu to Kirindi	Namasagali to Bunyamira	Makwanzi	Buyala to Kikuba -Mutwe	Matumu to Kirindi	Namasagali to Bunyamira	(Kikuba-Mutwe)	Ifanda Falls	Kirindi
	<i>Barbus paludinosus</i>		LC											
	<i>Labeo victorianus</i>	Nningu, Nsuku	CE									R	R	R
	<i>Rastrineobola argentea</i>	Mukene	LC									C		
Lepidosirenidae	<i>Protopterus ethiopicus</i>	Mamba	NY A									R	R	R
Mochokidae	<i>Synodontis afrofisheri</i>	Nkolongo	LC									F		F
	<i>Synodontis. victoriae</i>	Nkolongo	NT											F
Mormyridae	<i>Marcusenius grahami</i>		LC											
	<i>Mormyrus kannume</i>	Kasulubana	LC									C	C	C
	<i>Mormyrus. macrocephalus</i>		LC										R	R
	<i>Petrocephalus catastoina</i>		NY A											
	<i>Gnathonemus victoriae</i>		NY A											

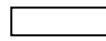
Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

Family Name	Species Name	Local Names	IUCN Redlist 2016	FIRRI 2000				NAFIRRI 2006				Fisher's Survey 2016		
				Makwanzi	Buyala to Kikuba -Mutwe	Matumu to Kirindi	Namasagali to Bunyamira	Makwanzi	Buyala to Kikuba -Mutwe	Matumu to Kirindi	Namasagali to Bunyamira	(Kikuba-Mutwe)	Ifanda Falls	Kirindi
	Gnathonemus. <i>longibarbis</i>		LC											
Schilbeidae	Schilbe <i>intermedius</i>		LC											
				9	8	8	9	11	9	6	6	14	13	15

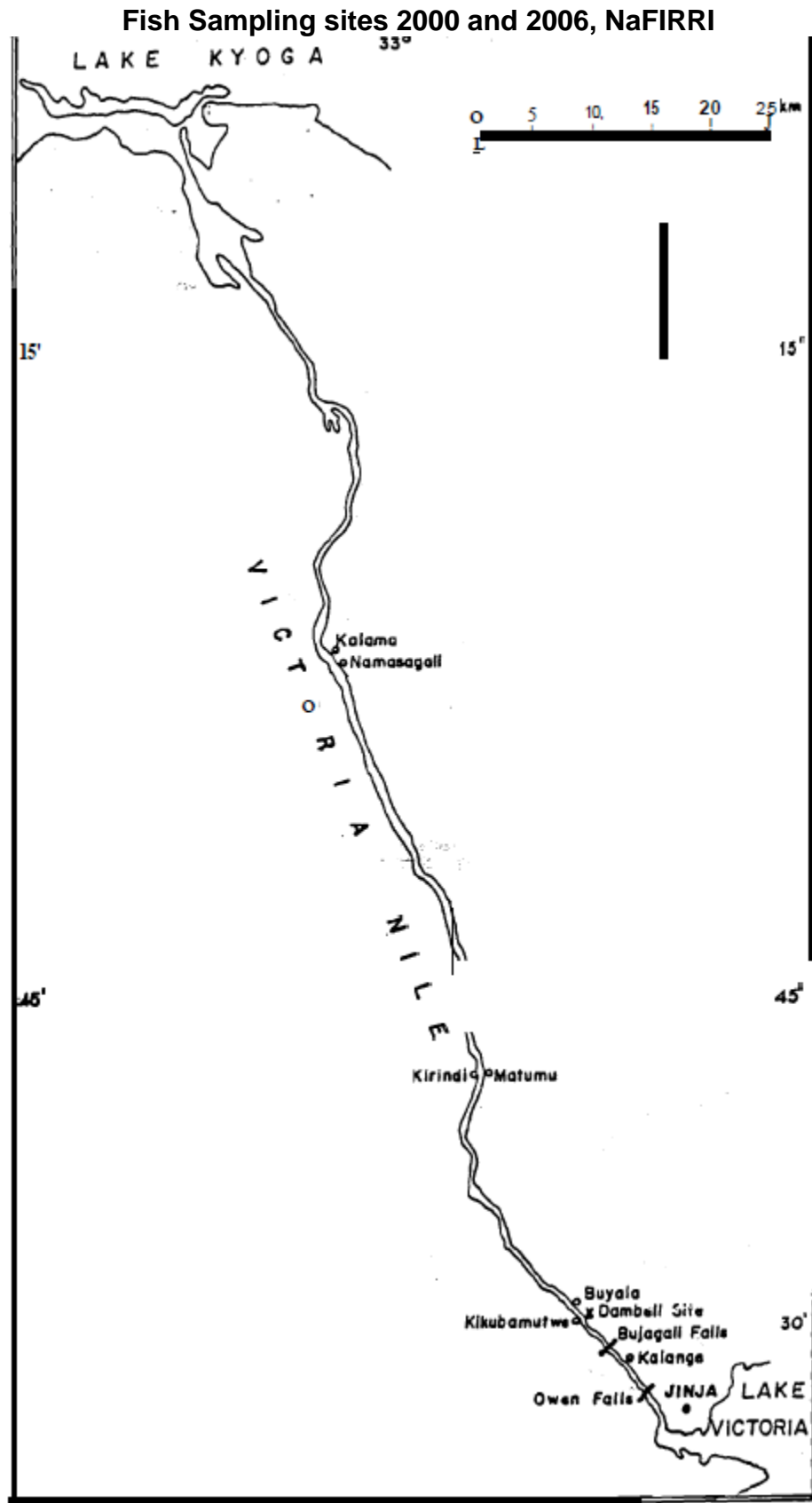
IUCN Redlist Category : CE = Critically Endangered; E = Endangered ; LC = Least Concern; NYA = Not Yet Accessed but in the list of catalogue of life; Occurrence Status C= Common, F= Frequent, R= Rare



Species



Species Absent



Highlights of the Global Conservation Category Species recorded in the Upper Victoria Nile excluding *Haplochromines* species

Oreochromis variabilis, the **Victoria tilapia**, IUCN Red List Category: Critically Endangered

It is a species of cichlid native to Lake Victoria and its tributaries, Lake Kyoga, Lake Kwana and Lake Salisbury as well as being found in the Victorian reach of the Nile above Murchison Falls. This species can reach a length of 30 centimeters. This species is important to local commercial fisheries as well as being potentially important in aquaculture. It is also found in the aquarium trade

It occurs most abundantly on exposed and sandy shores where there is considerable water movement. It also occurs in the calm waters of water lily swamps. Found at a depth range of 0–40 m but most commonly in water less than 10 m deep. The young fish feed on planktonic algae and may ingest small copepods. The adults feed predominantly on bottom algae but they also feed directly on plankton and may graze algae from rocks and aquatic plants. It spawns on firm or sand habitats and breeding males may occasionally be seen guarding their circular nests in water a few feet deep at the edge of the lake. Young are brooded until about 15 mm long. Brooding females have been caught in the rushes and among vegetation near the edges of the lake

The main threats are:

- Over-fishing, particularly using illegal methods and gear.
- Competition for habitats and food with exotic species (introduced Nile tilapia), and
- predation by the introduced Nile perch.

Brycinus jacksonii IUCN Red List Category: Endangered

It is found in Kenya, Rwanda, Tanzania and Uganda. It occurs in Lake Victoria and some surrounding streams. It is a native species of Burundi; Congo, The Democratic Republic of the Tanzania, United Republic of Uganda.

It is found in shallow inshore areas of lakes and quiet parts of rivers. It feeds on small fishes and invertebrates including snails and chironomid pupae and plants. Breeding biology not well known. Max. size: 27 cm.

The main threat to the species are:

- water turbidity and siltation as a consequence of erosion and farming extension on the watersheds.
- Competitive displacement and predation by Nile perch. Illegal fishing practices such as undersized net

Synodontis victoriae IUCN Red List Category: Near Threatened

Endemic to Lake Victoria and the Victoria Nile and associated rivers and smaller lakes. Also known from the Malagarasi River. This is a native species of Kenya; Tanzania, United Republic of; Uganda.

This species is found in shallow waters of lakes and rivers, most often at around 20 m, although it has been recorded down to 80 m. It occurs over both hard and soft substrates, but is more common over soft bottoms. It feeds mainly on small gastropod molluscs, as it is able to extract the flesh of the snails without crushing their shells. It also feeds on insects, among which chironomid larvae predominate. About 45 % of the stock is in spawning state at any one time. Maximum size of the fish is 290 mm.

The main threat to this fish species is the regression of marginal reeds around rivers and lakes due to extension of agriculture; undersized fishing nets; siltation and water pollution; and predation and competition in Lake Victoria.

Appendix 11: Haplochromine cichlids Diversity Upper Victoria Nile

Haplochromine species across the sampling stations along the upper Victoria Nile.. (After Atkins, FIRRI, 2001)

Haplochromine Species	IUCN red list Category 2016	Victoria Zone				Yellow Zone/ Transition Zone				Kyoga Zone	
		Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10
<i>Astatoreochromis alluaudi</i>	LC										
<i>Astatotilapia brownae</i>	CE										
<i>Astatotilapia nubila</i>	NYA										
<i>Astatotilapia sp.</i>											
<i>Haplochromis lividus</i>	DD										
<i>Haplochromis "silver arrow"</i>	NYA/NC										
<i>Lithochromis rubripinnis</i>	LC										
<i>Lithochromis xanthopterox</i>	V										
<i>Mbipia mbipi</i>	LC										
<i>Mbipia "red pelvics"</i>	NYA/NC										
<i>Mbipia "yellowfin"</i>	NYA/NC										
<i>Neochromis gigas</i>	V										
<i>Neochromis greenwoodi</i>	LC										
<i>Neochromis omnicaeruleus</i>	LC										
<i>Neochromis rufocaudalis</i>	LC										
<i>Neochromis simotes</i>	DD										
<i>Neochromis "lemon britti"</i>	NYA/NC										
<i>Neochromis "red simotes"</i>	NYA/NC										
<i>Neochromis "yellow rufocaudalis"</i>	NYA/NC										
<i>Paralabidochromis cyaneus</i>	NYA/NC										
<i>Paralabidochromis flavus</i>	NYA/NC										
<i>Paralabidochromis "rockkribensis"</i>	NYA/NC										
<i>Prognathochromis guiarti</i>	NYA/NC										
<i>Psammochromis riponianus</i>	NYA										
<i>Ptyochromis sauvagei</i>	V										

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

Haplochromine Species	IUCN red list Category 2016	Victoria Zone				Yellow Zone/ Transition Zone				Kyoga Zone	
		Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10
<i>Ptyochromis xenognathus</i>	NYA										
<i>Pundamilia azurea</i>	V										
<i>Pundamilia igneopinnis</i>	E										
<i>Pundamilia macrocephala</i>	V										
<i>Pundamilia pundamilia</i>	LC										
<i>Pundamilia "yellow-multispot"</i>	NYA/NC										
<i>Pyxichromis orthostoma</i>	V										
<i>Xystichromis bayoni</i>	Ex										
<i>Xystichromis nuchisquamulatus</i>	DD										
<i>Xystichromis phytophagus</i>	DD										

Note:

Sampling Locations:

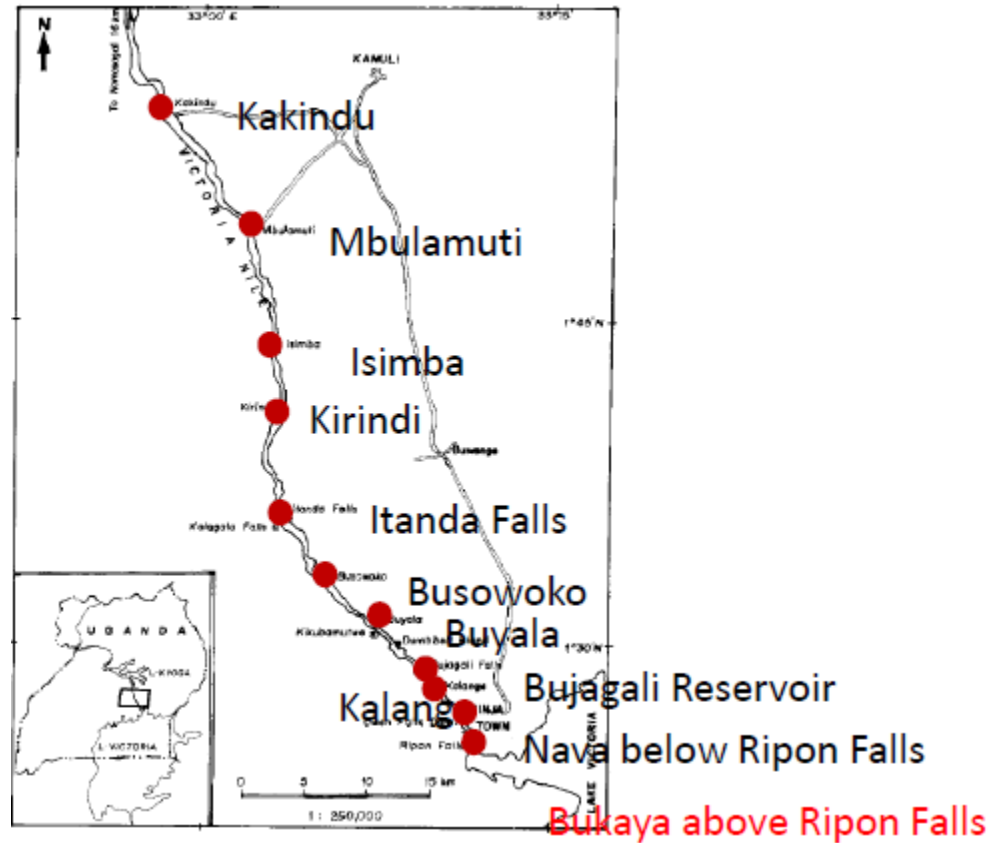
Site 1 =Ripon Falls; Site 2 = Kalange; Site 3 = Bujagali ; Site 4 = Buyala; Site 5 = Busowoko; Site 6 = Itanda/Kalagala; Site 7 = Kirindi; Site 8 = Isimba; Site 9 = Mbulamuti and Site 10 = Kakindu

IUCN Redlist Category :

Ex = Extinct; CE = Critically Endangered; E = Endangered ; V = Vulnerable; DD = Data Deficient, LC = Least Concern; NYA = Not Yet Accessed but in the list of catalogue of life; NYA/NC = Not Yet accessed also inot in the catalogue of Life.

	Species absent
	Species present
	Species confined to Yellow Zone only
	Species confined to Victoria Zone only
	Species confined to Kyoga Zone only

Haplochromine cichlids Sampling Sites 2001 (Atkins) and 2016 (NaFIRRI)



Highlights on the Haplochromine cichlid species of global conservation Category

Marcusenius victoriae

IUCN Red List Category: Endangered

It is an species of Lake Victoria basin where it is restricted to bays associated with rivers (e.g., Rubafu/Kagera; Mori bay/river; and Mara bay/river). Also found in Lake Katwe, a satellite lake in Lake Victoria basin, the middle and lower Akagera, Lake Kyoga, Lake Nabugabo and associated smaller lakes. Present in the Victoria Nile. It is a native species of Kenya, Rwanda, Tanzania, and United Republic of Uganda

Found in shallow inshore waters near river mouths on both soft and rocky bottoms, in or near marginal plants. Originally abundant near water lily swamps in Lake Kyoga. Feeds on aquatic insect larvae (especially Chironomidae, Polymitarcidae and Odonata), crustaceans, gastropods, fish eggs and detritus.

The major threats to the species are:

- Domestic pollution;
- illegal fishing methods;
- fisheries pressure;
- loss of wetland habitats due to agricultural expansion; and
- competitive displacement by introduced species

Astatotilapia brownae

IUCN Red list Category: Critically Endangered

This species is endemic to Lake Victoria. It has been recorded in surveys carried out in Tanzania and Uganda (Greenwood 1981). The species is considered possibly extinct .

This species has declined in numbers dramatically since 1980. Frequency of occurrence data per 5 minute trawl across shallow sand in Mwanza Gulf (Witte *et al.* 1992) show a decrease from 81% in 1979-82, to 0% in 1987/88 and 1993/95. In data from 2006/08, only occasionally was a specimen caught that might belong to this species, however due to apparent hybridisation, these specimens cannot be confirmed and are likely to have been misidentified.

It is a fresh water species, normally habiting sandy substrate in the littoral zone. This species can reach a length of 10.4 centimeters (4.1 in) . It is classified as an insectivore. This species is fished, although not targeted specifically.

The main threat to this species is

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)
- predation by Nile Perch (a potentially reversible threat).

Haplochromis lividus

IUCN Redlist Category : Data Deficient.

This species is endemic to Lake Victoria. It has been recorded in surveys carried out in Tanzania and Uganda. It is a native species of Tanzania and Uganda.

This is a freshwater species restricted to areas in the littoral zone where the substrate is firm (sand, rock). This species can reach a length of 9 centimeters (3.5 in). It is an epiphytic algae grazer. This species is fished, although not targeted specifically.

The main threat to this species is

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)
- Predation by introduced Nile Perch.

Neochromis gigas

IUCN Red List Category: Vulnerable

This species is known with certainty only from the Speke Gulf and Mwanza Gulf of lake Victoria. It is a native species of Tanzania and Uganda.

The species is restricted to rocky shores where it is more abundant at gently sloping shores than at steeply sloping shores. Absent from very steep slopes. This species can reach a length of 14.2 centimeters (5.6 in). The species is found to 4 m depth (littoral zone). The species is an epilithic algae grazer.

The main threat to this species is

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff) interfering with mate recognition visual cues.
- capture as bait for long line fishery.

Neochromis simotes

IUCN Red List Category: Data Deficient

Previously this species is categorized as critically endangered in the IUCN Red list. (www.iucnredlist.org/pdf/link.12372180), but the taxonomy of Fish Base is now followed. An updated Red List assessment has been produced to reflect this taxonomic change.

This species is known from the type locality (Kakindu) and from Ripon Falls, both at the Victoria Nile near Jinja (Uganda).

This is a native species of Uganda particularly Victoria Nile. It is a fresh water species. Its habitat is not well understood. The species is an epilithic algae grazer.

Threats to this species are not fully understood, but are likely to include

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)

Ptyochromis sauvagei

IUCN Red List Category: Vulnerable

This species is endemic to Lake Victoria. It has been recorded in surveys carried out in Kenya, Tanzania and Uganda .

This is a freshwater species habiting rocky shores in the littoral zone. This species reaches a length of 10.5 centimeters (4.1 in). It is classified as an insectivore.

The main threat to this species is

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)
- capture as bait for long line fishery.

Pundamilia azurea

IUCN Red List Category: Vulnerable

This species is endemic to island groups in the middle of the Speke Gulf, Lake Victoria

This freshwater species is restricted to rocky substrates, living between 2 and 14 m depth (littoral and sub-littoral zone). Occurs only in rocky substrates. Inhabits moderately steep and steeply sloping large boulder stones. Feeds on plankton. Maximum length of the fish is 9.6 cm. It is a zooplanktivore. This species is fished, although not targeted specifically.

The main threat to this species is

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)
- capture as bait for long line fishery.
- Predation by introduced Nile Perch

Pundamilia igneopinnis

IUCN Red List Category: Endangered

This species is known only from the south-western shores of the Speke Gulf. It is a native species of Tanzania and Uganda.

It is a freshwater species and is restricted to rocky substrates (littoral zone). It inhabits moderately steep and steep rocky shores with medium sized to very big boulders. On moderately steep slopes, it is confined to slightly offshore areas beyond 2 m depth. On steep slopes it inhabits already immediately inshore waters where it lives in deep and wide gaps between big boulders. This species can reach a length of 10.8 centimeters (4.3 in).

The main threat to this species is

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)
- capture as bait for long line fishery.

Pundamilia macrocephala

IUCN /red List Category: Vulnerable

This is a native species of Tanzania and Uganda. This species is known mainly from the Mwanza Gulf, where Python Islands harbor the most southern population. It is also known from three islands in the Speke Gulf, while it is almost absent from the many other islands and mainland rock shores in the Speke Gulf region ,.

This fresh water speceis is restricted to rocky shores at depths between 2 and at least 10 m (littoral and sub-littoral zone). It appears that it does, however, not occur in inshore rock

crevices and pools. Diet consists of benthic invertebrates and zooplankton. This species can reach a length of 10.6 centimetres (4.2 in) .

The main threat to this species is

- predation by Nile Perch (a potentially reversible threat)
- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)

Pyxichromis orthostoma

IUCN Red List Category : Vulnerable

This is a native speceis of Uganda. It is Endemic to Lake Nawampasa and Lake Kyoga.

It is a freshwater benthopelagic speceis. This species can reach a length of 9.1 centimeters (3.6 in). This fish is a piscivore in the wild.

Xystichromis bayoni

IUCN Red List Category: Extinct in the Wild

This is a endemic speceis of lake Victoria. It reaches a maximum length of 15.4 centimeters (6.1 in).

Xystichromis nuchisquamulatus

IUCN Red List Category : Data Deficient

This species is endemic to Lake Victoria. Found in Lake Victoria and the adjacent reaches of the Nile. Exact details on its distribution within the lake are not known.

There is no information on the substrate over which the species has been found. Most specimens were caught in exposed littoral zones of Lake Victoria, and one in the Victoria Nile. This species can reach a length of 11.3 centimeters (4.4 in) .The species is an epiphytic algae grazer. This species is fished, although not targeted specifically.

Threats to this species are not fully understood, but are likely to include

- hybridization due to decreased water transparency (on account of eutrophication and erosion leading to increased sedimentation and runoff)
- predation by introduced Nile Perch.

Appendix 12 : Haplochromine cichlid species composition along the Upper Victoria Nile - After NaFIRRI 2016 Survey

Haplochromine cichlid Speceis	Survey Locations										
	1	2	3	4	5	6	7	8	9	10	11
<i>Astatoreochromis alluaudi</i>							█	█	█		
<i>Astatotilapia cf. brownae</i>							█				█
<i>Astatotilapia nubila</i>	█		█			█					
<i>Haplochromis sp.</i>					█						
<i>Haplochromis sp. cf. red back scraper</i>			█								
<i>Haplochromis sp. flameback</i>				█			█	█			
<i>Haplochromis sp. purple yellow</i>	█					█					
<i>Haplochromis sp. thick skin like</i>						█					
<i>Harpagochromis sp.</i>				█	█						
<i>Harpagochromis sp. 2</i>											█
<i>Harpagochromis sp. guiarti complex</i>		█			█					█	█
<i>Lipochromis sp</i>	█										
<i>Lithochromis sp.</i>					█	█	█				
<i>Lithochromis sp. yellow chin</i>									█		
<i>Lithochromis xanthopteryx</i>								█	█	█	
<i>Mbipia cf. mbipi</i>					█						
<i>Mbipia mbipi</i>	█					█	█	█			
<i>Mbipia sp.</i>					█						
<i>Mbipia sp. golden</i>	█										
<i>Mbipia sp. Uganda blue scraper</i>			█								
<i>Neochromis cf. large scale nigricans</i>	█										
<i>Neochromis greenwoodi</i>	█	█	█		█	█	█	█		█	
<i>Neochromis simotes</i>								█	█	█	█
<i>Neochromis sp.</i>						█					
<i>Neochromis sp. Labeo new</i>											█
<i>Neochromis sp. new species 1</i>	█										
<i>Neochromis sp. red pelvic</i>									█	█	
<i>Paralabidochromis flavus</i>					█						
<i>Paralabidochromis sauvagei (rockkribensis)</i>	█										
<i>Paralabidochromis sp.</i>			█		█						
<i>Paralabidochromis sp. 1</i>	█										
<i>Paralabidochromis sp. Nile</i>		█	█				█				
<i>Paralabidochromis sp. red breast new</i>						█					
<i>Paralabidochromis sp. short snout</i>		█									█

Haplochromine cichlid Speceis	Survey Locations										
	1	2	3	4	5	6	7	8	9	10	11
<i>scraper</i>		■									■
<i>Paralabidochromis sp. yellow multispot</i>						■					
<i>Psammochromis riponianus</i>			■								
<i>Psammochromis sp.</i>					■						
<i>Psammocromis cf. acidens</i>			■								
<i>Ptyochromis sp 2</i>								■			
<i>Ptyochromis xenognathus red pelvic</i>											■
<i>Ptyochromis/Psammochromis sp. 1</i>									■	■	■
<i>Pundamilia cf. azurea</i>	■										
<i>Pundamilia cf. macrocephala</i>					■						
<i>Pundamilia igneopinis_Nile</i>			■								
<i>Pundamilia pundamilia</i>			■								
<i>Pundamilia sp.</i>			■			■	■				
<i>Pundamilia sp. 1</i>						■	■				
<i>Pundamilia sp. big blue</i>					■						
<i>Pundamilia sp. blue lip</i>						■					
<i>Pundamilia sp. lemon fin like</i>											
<i>Pundamilia sp. Red rim anal fin</i>			■								
<i>Pyxichromis orthostoma</i>								■			■
<i>Unknown species 1</i>			■								
<i>Unknown species 2</i>				■							
<i>Unknown species 3</i>				■							
<i>Unknown species 4</i>								■			
<i>Unknown species 5</i>								■			
<i>Unknown species 6</i>								■			
<i>Xystichromis phytophagus</i>											■
<i>Xystichromis sp. flameback</i>						■			■	■	■
<i>Xystichromis/Haplochromis sp</i>											■
	11	4	13	4	12	13	9	11	7	7	12

Note: Survey location Map as per Appendix 11

Sampling sites: 1 = Ripon falls, 2 = Lower Naava, 3 = Kalange, 4= Bujagali, 5 = Buyala, 6= Busowoko, 7 = Itanda, 8 = Kirindi, 9 = Isimba 10 = Mbulamuti and 11 = Kakindu

	Species absent
	Species present

Appendix 13: Comparative Table showing Haplochromine cichlid species of Upper Victoria Nile based on 2001 and 2016 surveys

<i>Haplochromines Cichlid Speceis</i>	IUCN Red List 2016	NaFIRRI Survey 2016 (Locations)										Atkin's Survey 2001 (Locations)									
		1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
<i>Astatoreochromis alluaudi</i>	LC																				
<i>Astatotilapia brownae</i>	CE																				
<i>Astatotilapia nubila</i>	NYA																				
<i>Astatotilapia sp.</i>	NYA																				
<i>Haplochromis lividus</i>	DD																				
<i>Haplochromis "silver arrow"</i>	NYA/NC																				
<i>Haplochromis sp.</i>																					
<i>Haplochromis sp. cf. red back scraper</i>																					
<i>Haplochromis sp. flameback</i>																					
<i>Haplochromis sp. purple yellow</i>																					
<i>Haplochromis sp. thick skin like</i>																					
<i>Harpagochromis sp.</i>																					
<i>Harpagochromis sp. 2</i>																					
<i>Harpagochromis sp. quiarti complex</i>																					
<i>Lithochromis rubripinnis</i>	LC																				
<i>Lipochromis sp</i>																					
<i>Lithochromis sp.</i>																					
<i>Lithochromis sp. yellow chin</i>																					
<i>Lithochromis xanthopteryx</i>	V																				
<i>Mbipia cf. mbipi</i>																					
<i>Mbipia mbipi</i>	LC																				
<i>Mbipia sp.</i>																					
<i>Mbipia "red pelvics"</i>	NYA/NC																				
<i>Mbipia "yellowfin"</i>	NYA/NC																				
<i>Mbipia sp. golden</i>																					
<i>Mbipia sp. Uganda blue scraper</i>																					

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

Haplochromines Cichlid Speceis	IUCN Red List 2016	NaFIRRI Survey 2016 (Locations)										Atkin's Survey 2001 (Locations)									
		1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
<i>Neochromis cf. large scale nigricans</i>		■																			
<i>Neochromis gigas</i>	V											■				■	■	■	■	■	
<i>Neochromis greenwoodi</i>	LC	■	■		■	■	■	■		■			■	■							
<i>Neochromis omnicaeruleus</i>	LC											■				■					
<i>Neochromis rufocaudalis</i>	LC											■		■		■	■	■	■	■	■
<i>Neochromis simotes</i>	DD							■	■	■	■							■		■	
<i>Neochromis sp.</i>						■															
<i>Neochromis sp. Labeo new</i>										■											
<i>Neochromis sp. new species 1</i>		■																			
<i>Neochromis "lemon britti"</i>	NYA/NC																■				
<i>Neochromis sp. red pelvic</i>	NYA/NC								■	■						■	■				
<i>Neochromis "yellow rufocaudalis"</i>	NYA/NC																				■
<i>Paralabidochromis cyaneus</i>	NYA/NC														■						
<i>Paralabidochromis flavus</i>	NYA/NC				■							■									
<i>Paralabidochromis sauvagei (rockkribensis)</i>	NYA/NC	■										■			■	■		■	■		
<i>Paralabidochromis sp.</i>			■		■																
<i>Paralabidochromis sp. 1</i>		■																			
<i>Paralabidochromis sp. Nile</i>			■				■														
<i>Paralabidochromis sp. red breast new</i>						■															
<i>Paralabidochromis sp. short snout scraper</i>										■											
<i>Paralabidochromis sp. yellow multispot</i>						■															
<i>Prognathochromis quiarti</i>	NYA/NC											■	■			■		■			
<i>Psammochromis riponianus</i>	NYA		■									■			■	■	■		■		■
<i>Psammochromis sp.</i>					■																
<i>Psammochromis cf. acidens</i>			■																		
<i>Ptyochromis sp 2</i>								■													
<i>Ptyochromis sauvagei</i>	V														■	■		■			
<i>Ptyochromis xenognathus red pelvic</i>	NYA									■						■					

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

<i>Haplochromines Cichlid Speceis</i>	IUCN Red List 2016	NaFIRRI Survey 2016 (Locations)										Atkin's Survey 2001 (Locations)									
		1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
<i>Ptyochromis/Psammochromis sp. 1</i>																					
<i>Pundamilia cf. azurea</i>	V																				
<i>Pundamilia cf. macrocephala</i>	V																				
<i>Pundamilia igneopinis_Nile</i>	E																				
<i>Pundamilia pundamilia</i>	LC																				
<i>Pundamilia sp.</i>																					
<i>Pundamilia sp. 1</i>																					
<i>Pundamilia sp. big blue</i>																					
<i>Pundamilia sp. blue lip</i>																					
<i>Pundamilia sp. lemon fin like</i>																					
<i>Pundamilia sp. Red rim anal fin</i>																					
<i>Pundamilia "yellow-multispot"</i>	NYA/NC																				
<i>Pyxichromis orthostoma</i>	V																				
<i>Unknown species 1</i>																					
<i>Unknown species 2</i>																					
<i>Unknown species 3</i>																					
<i>Unknown species 4</i>																					
<i>Unknown species 5</i>																					
<i>Unknown species 6</i>																					
<i>Xystichromis bayoni</i>	Ex																				
<i>Xystichromis nuchisquamulatus</i>	DD																				
<i>Xystichromis phytophagus</i>	DD																				
<i>Xystichromis sp. flameback</i>																					
<i>Xystichromis/Haplochromis sp</i>																					
<i>Total speceis Composition</i>		11	13	4	12	13	9	11	7	7	12	12	11	6	10	17	13	13	13	9	7

Note: Survey location Map as per Appendix 11

: 1 = Ripon falls, 2 = Kalange, 3= Bujagali, 4 = Buyala,5= Busowoko, 6 = Itanda, 7 = Kirindi, 8 = Isimba 9 = Mbulamuti and 10 = Kakindu

Species absent		Species present
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Appendix 14: IHPP APs and Cadastral Maps
A. List of IHPP affected APs/Households in KFS (IHPP Alternative 1)

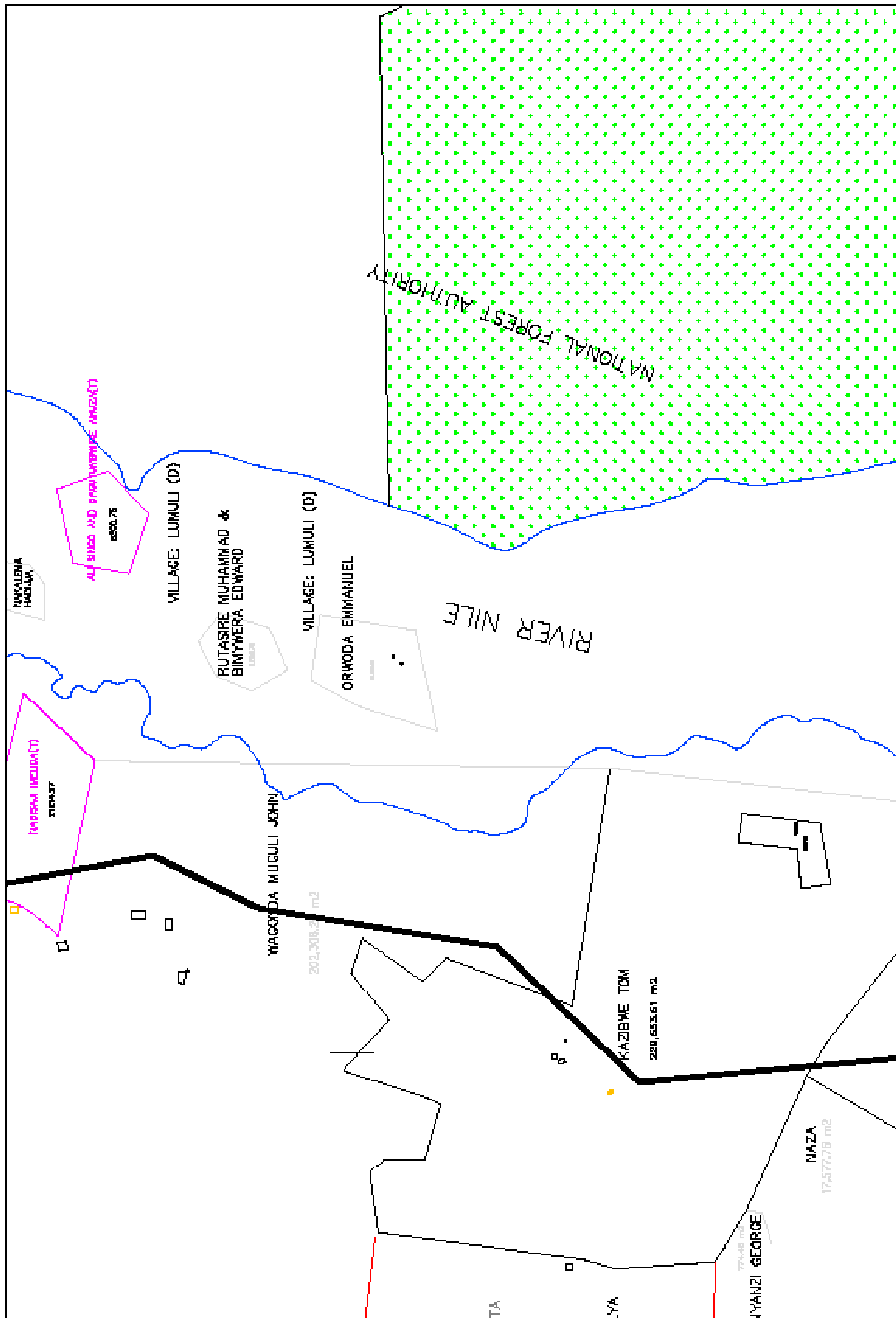
IHPP Alternative 1				
	District:KAYUNGA	County:Ntenjeru	Subcounty:NAZIGO	Parish:KIRINDI
No	Name	Affected Land Area Sq M	Village Name:NAKAKONGE	
1	AKONGO BUDESTA	687.49		
2	SSERWANGA TOM	105.14		
3	SSANGA KOI	2165.5		
4	GRACE AUMA BUDESTER	9667.06		
5	BENGO	1961.86		
	District:KAYUNGA	County:Ntenjeru	Subcounty:NAZIGO	Parish:KIRINDI
			Village Name:NSIIMA-SIBAATI	
7	BESWERI MUKUYE	9340.32		
8	MIDAAGO BADRU	11948.76		
9	SENOGA PAUL	16234.06		
10	MUWONGE MUHAMADI	21528.16		
11	MUKWAYA CELESTINO	1451.31		
	MUKWAYA CELESTINO	16771.01		
12	MUWANIKA SULAITI(TO	12982.69		
13	SENOGA PAUL	32226.32		
14	OBALA PAUL	29148.75		
15	ERALI PAUL	22821.19		
16	NABISAJI IMELIDA(T)	21214.97		
17	WAGONDA MUGULI JOHN	202,306.26		
	District:KAYUNGA	County:Ntenjeru	Subcounty:NAZIGO	Parish:NATTE TA
			Village Name:NSIIMA-NSIIMA SIPOOTA	
1	KAZIBWE TOM	229,653.61		
	District:KAYUNGA	County:Ntenjeru	Subcounty:NAZIGO	Parish:NSIIMA
			Village Name:WABIRONGO	
1	NAMWANDU KEYA			
2	KAZIBWE TOM	2,981.34		
3	KAKAYI ROSEMARY	7,858.39		

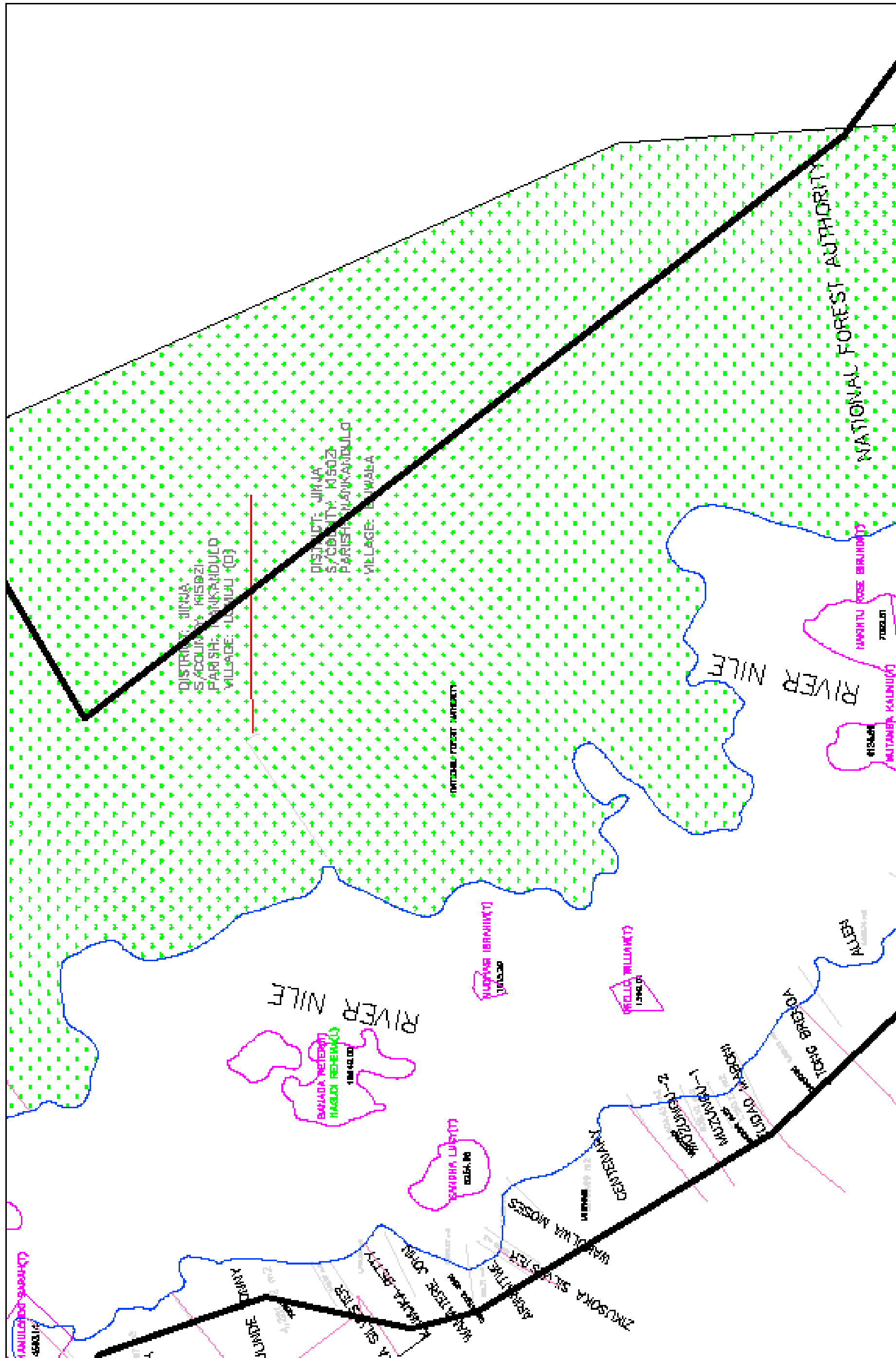
Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

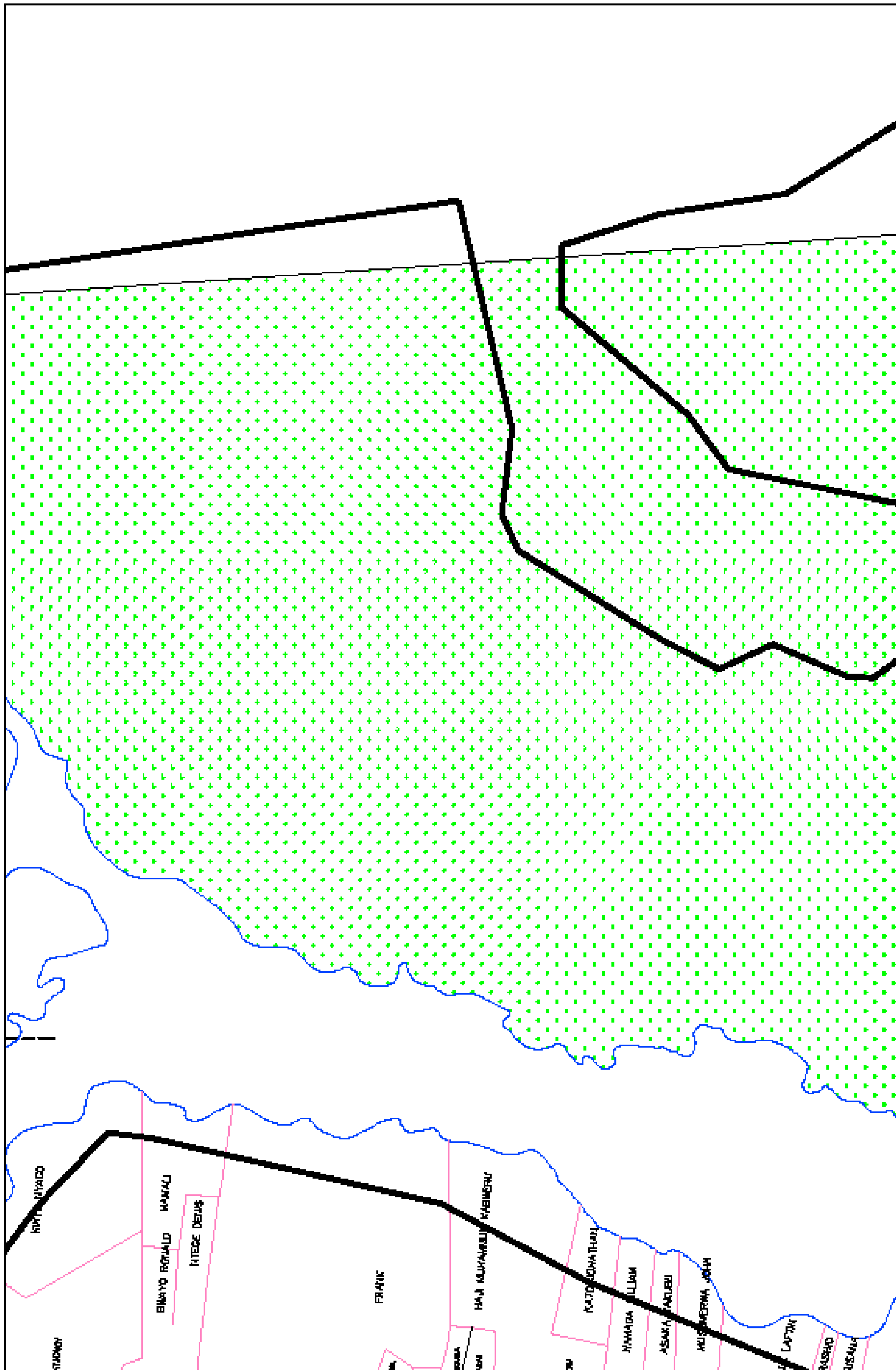
	District:KAYUNGA	County:Ntenjeru	Subcounty:NAZIGO	Parish: KIGAYAZA
			Village Name:KITAMBUZA	
1	EKWARA PETER	13,954.12		
2	NGOBI ROBERT(T)	6165.65		
6	NYAGO KINTU	5,277.43		
8	HENRY (MUZUNGU)	542.48		
9	NAMULONDO SARAH(T)	4593.14		
10	KAWUKA BETTY	3,729.97		
11	MULINDE TONNY	4,281.82		
12	ZIKUSOKA SILVESTER	546.81		
14	KAWUKA BETTY	1,739.28		
15	WAMATERE JOHN	2,272.57		
16	ARINAITWE	619.71		
17	ZIKUSOKA SILVESTER	494.65		
18	WAKULWA MOSES	1,415.28		
19	CENTENARY	3,760.59		
20	MUZUNGU-2	1,404.43		
21	MUZUNGU-1	838.1		
23	ELIDAD MABONI	1,190.27		
24	ATONG BRENDA	3,099.22		
25	ALLEN	6,668.74		
26	MULUNDA HARUNA			
27	EDINANI			
28	MATEMBERA ROBERT			
29	UNKNOWN			
30	UNKNOWN			
	District:Jinja	County:Kagoma	Subcounty:Buwala	Parish: Lumuli
			Village Name: Lumili (D)	
1	NATIONAL FOREST AUTHORITY			
2	MWAGALA HAMUZA(T)	5561.15		
3	MUTAASA GRACE(T)	4272.09		

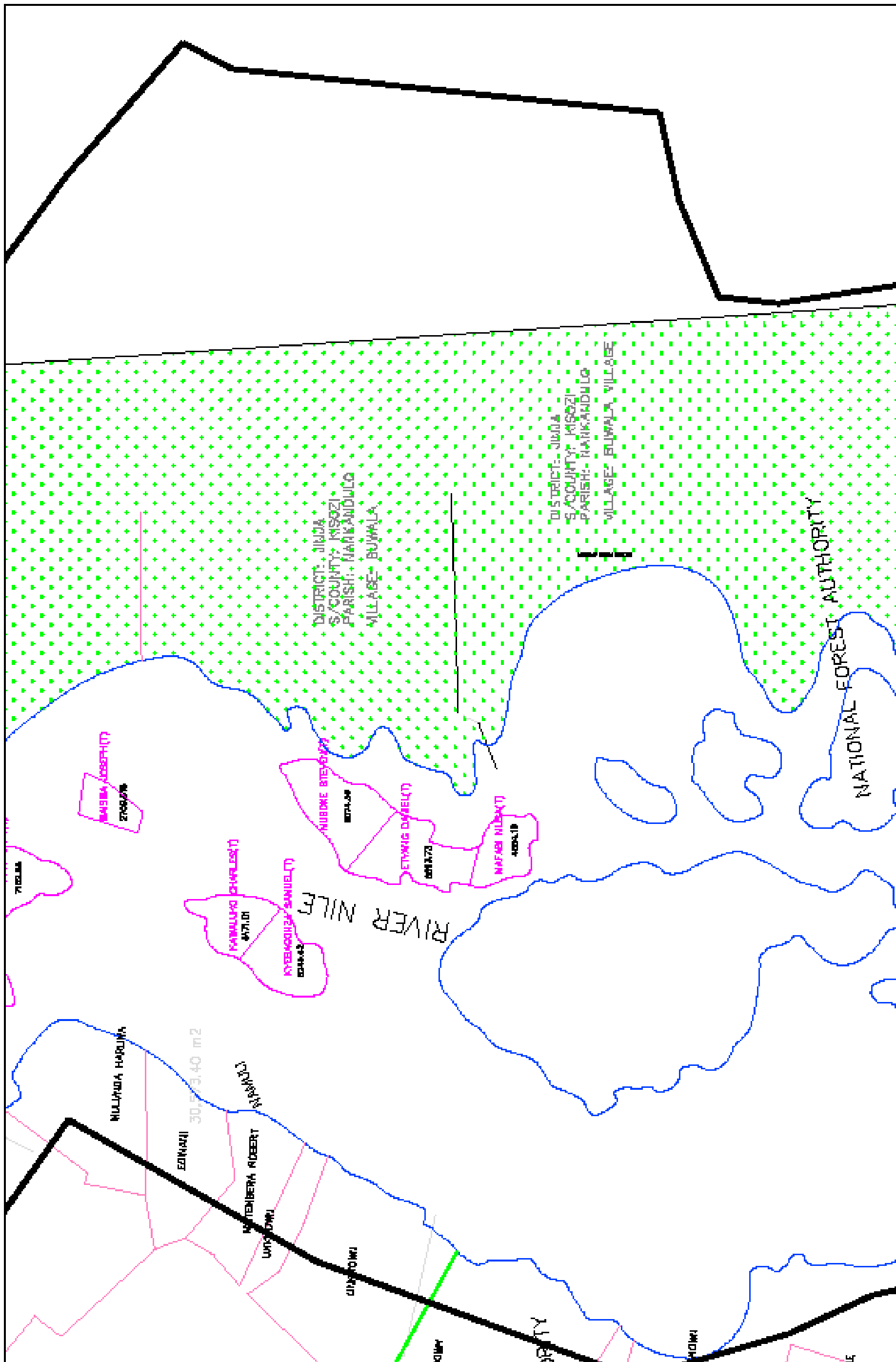
Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

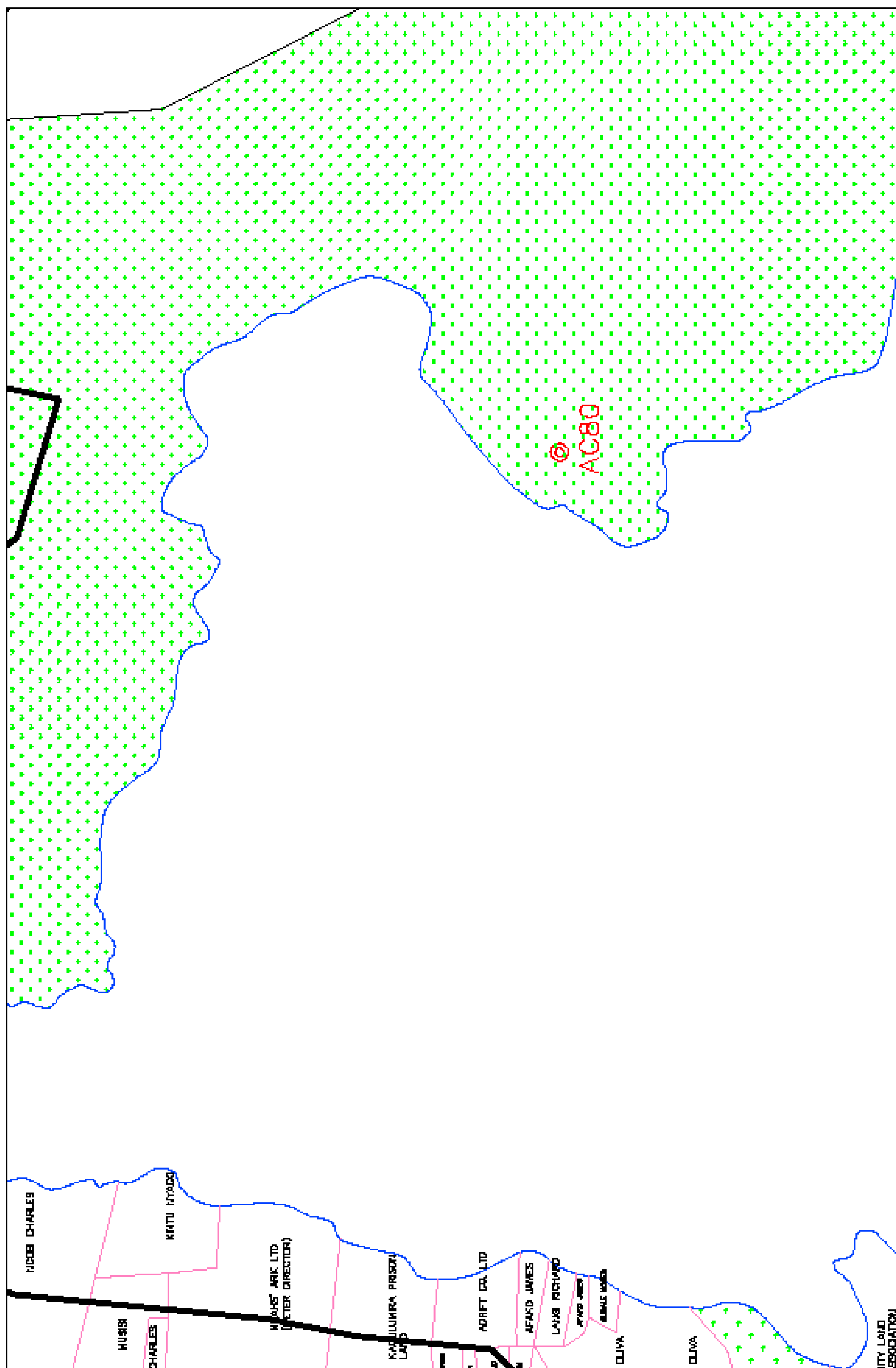
4	KATO IBRAHIM & BABIRYE FARIDA	3,561.82		
5	NAKALEMA HADIJJA	3,154.49		
6	ALI SINGO AND BAGUTUMBWIIRE AMUZA(T)	8200.75		
7	RUTASIRE MUHAMMAD & BIMYWERA EDWARD	5,598.78		
8	ORWODA EMMANUEL	12,060.25		
9	ORWODA EMMANUEL	24,501.12		
10	ALIMUNDHU SIMON(T)	5552.63		
11	MAKANGA ROBERT(T)	5040.99		
12	WOGENZA PAUL(T)	10752.17		
13	NAMBOTE AGNES MARY(1662.96		
14	NAGUDI REHEMA(L)	16649		
15	MUDHASI IBRAHIM(T)	1615.2		
16	OKELLO WILLIAM(T)	1399.01		
17	MUTAMBA KALIMU(T)	6125.99		
18	NAKINTU ROSE BIRUNGI(7092.61		
19	KIRUNDA JIMMY(T)	7162.88		
20	WAISWA JOSEPH(T)	2706.618		
21	KAWALUKO CHARLES(T)	6171.01		
22	KYEBAGONZA SAMUEL(T)	6246.62		
23	USOKE STEVEN(T)	9074.39		
24	ETYANG DANIEL(T)	9893.73		
25	MAFABI MUSA(T)	4564.19		

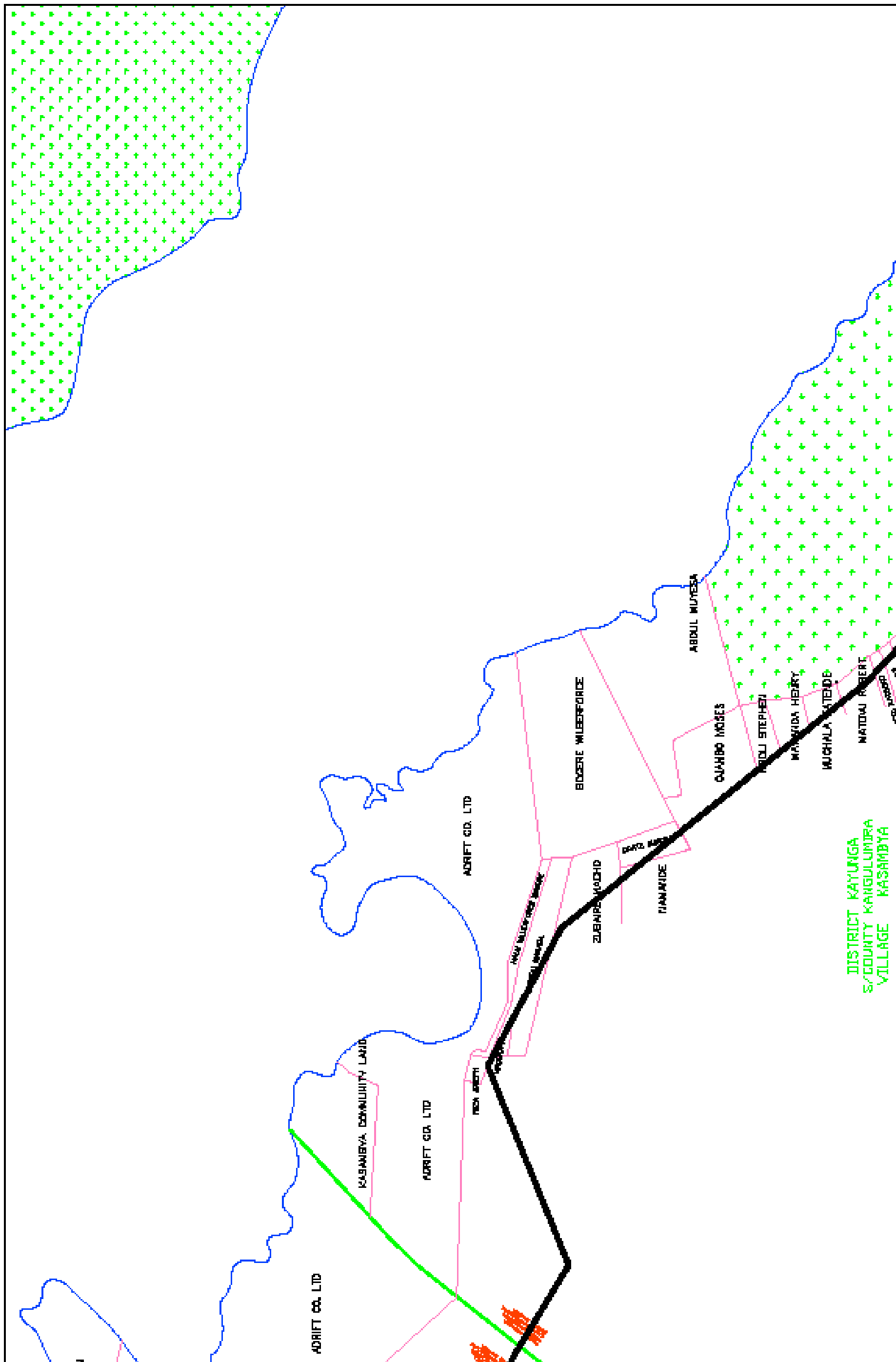












Appendix 15: Structured Questionnaire for Socio-economic Sample Survey

District Sub county

Village GPS Coordinates

Name of Interviewer

Date of Interview/.....2016

1. Household Head (Surname, First Name) _____

2. Sex _____ (M/F)

3. Age _____

1. Below 18

2. 18 – 25

3. 26 -35

4. 36 – 45

5. 46 – 55

6. 56 & above

4. Tribe

1. Muganda

2. Itesot

3. Musoga

4. Mugisu

5. Munyole

6. Mugwere

7. Musamia

8. Jopadhola

9. Lugbara

10. Others (Specify)

5. Of what religious affiliation is your household?

1. Catholic

2. Protestant

3. Muslim

4. Pentecostal

5. SDA

6. Others (Specify).....

6. Literacy/Education attainment (Fill table below)

	Full Name	Sex	Age	Do you reside on	Do you Farm on	Literacy Level (*)

				The affected Land (Yes / No)	the affected Land (Yes / No)	(See notes below table)
Head of Household						
Spouses						
Children						
Other Dependants						

* Literacy Levels: 1: Illiterate 2: Can read and write 3: Complete Primary Education 4: Complete Secondary Education 5: Complete University Education 6: Diploma holder

7. Summary on the number of members in the family (*to be calculated by interviewer from table above*)

- 1. Male
- 2. Female 3. Children (below 18 years of age)

8. Total land holding of the household (acres)

9. Have you been compensated for property found within the affected land?

- 1. Yes

2. NO

10. What is your relocation decision/plan?

1. Stay in balance of land

2. Move away (Specify where? – village, sub county and district - and whether land has already been secured

.....

3. I do not know

4. Other (Specify)

.....

11. Does the household live in own house?

1. Yes

2. NO

If **No** in 9 above, indicate type of occupancy

1. Rental

2. Provided Free

3. Others (specify)

12. Agriculture production from the farm land

Agriculture commodity grown	Annual Production in Kg	Production consumed (Kg)	Production Sold
Bananas (bunches)			
Maize			
Cassava			
Sweet potato			
Beans			
Rice			
Sugarcane (bundles)			
Others			
Others 1			
Others 2			

13. Is the production sufficient for the family consumption?

1. Yes

2. NO

14.a) If NO, then how many months in a year is it sufficient? No of Months

.....

15.b) If NO, then what do you do to get sufficient food requirement?

1. Wage labor,

2. Borrow/loans

3. Others if any (Specify)

16. How do you get your water supply at home?

1. Private Tap

2. Community Tap

3. River

4. Bore hole

5. Protected Springs/Wells

6. Non protected springs/ Wells

17. Where do you go when sick?

1. Local healer

2. Public Health Service Facility near by

3. Private Clinic

4. Self medication

18. What energy do you use for cooking?

1. Fuel wood

2. Animal Dung

3. Kerosene

4. LPG

5. Electricity

19. What energy do you use for Lighting?

1. Oil lamp

2. Kerosene lamp

3. Solar Light

4. Electricity

20. What is your source of information seeking?

1. Mobile phone

2. Radio

3. Television

- 4. News Paper
 - 5. Neighbor
 - 6. Community Leader
 - 7. Others (Specify)
-

21. Do you have toilet at your Residence?

- 1. Yes
- 2. No

22. What is the household Annual Income (US\$)

- 1. Up to 300 (Ug.Shs 1,011,000)
- 2. 301 - 500 (Ug.Shs 1,014,370 – 1,685,000)
- 3. 501 - 1000 (Ug.Shs 1,688,370 -3,370,000)
- 4.1001 to 2000 (Ug.Shs 3,373,370 – 6,740,000)
- 5. 2001 – 5000 (Ug.Shs 6,743,370 -16,850,000)
- 6. Above 5000- 10000 (Ug.Shs 16,850,000)

Thank you so Much for your time and attention

**Appendix 16: Lists of Institutions and Persons Interacted
A: Kick Off Meeting, Participants and minutes of Meeting**

No.	Names	Organization	Telephone Contact	Email
1.	ArdanAtvina	MEMD	077-2388381	a.atvina@energy.go.ug
2.	Caroline Aguti	MEMD	077-2619300	cagutieemzogy.go.ug
3.	ScoviaNakawuma	MEMD	078-2098785	snakwuma@gmail.com
4.	SpeciozaMukazi	MEMD	077-2614157	mspecy2004@yahoo.com
5.	RukundoTomm	EIAR/NFA	077-2591205	rukundotomndamirs@gmail.com
6.	Mbayeseok LO	ECU inc, Africa, Canada	077-9047709	Mbayeseok.w@ecu-consultants.net
7.	WillamBamulira	ECU (4)R	077-6665296	damulirawillam@gmail.com
8.	Ocutu-OhwayoRonard	NAGR	077-2421094	ocutuohwayo@yahoo.com
9.	Mafumbo Julius	Ministry of Water and Environment	077-2469037	Mfmjul001@yahoo.ug
10.	MarteinMutabingwa	MEMD	075-6609770	mmutabingwa@gmail.com
11.	Jack Mozingo	World Bank	+14-252607804	jack.mozingo@outlook.com
12.	MbusoGwafila	World Bank	+25-6775196231	mgwafila@worldbank.org
13.	VladoVucentic	World Bank	+12027796692	vvucentic@worldbank.org
14.	John Othiemo	VETCL	077-2670110	john.othiemo@vetcl.com
15.	Robert CharlsAguma	MWE/MWDP	077-2380340	Robert.aguma@mwego.ug
16.	MitsMotohash	World Bank	+1-202-644 0831	mmtohash@worldbank.org
17.	Alex BwoleUegcc	UEGCL	077-6456486	abuowe@mge.co.ug
18.	Ivan Senfuma	MEMD	071-1571193	Adminert2@energy.go.ug

2. Minutes of Meeting

- i. The relevant map defining the Kalagal Offset Area is the one contained in the Indemnity Agreement between IDA and Republic of Uganda, dated July 18th, 2007. There was an understanding at the meeting that the Consultant will reproduce a better quality map of the KFS consistent with the one in the Indemnity Agreement and share it with MEMD and the World Bank for verification.
- ii. Since the protection of KFS is vital to maintain the Victoria Nile River ecosystem, the Addendum report should clearly describe the main environmental and social impacts on KOA, and develop corresponding mitigation measures.
- iii. Consultant will submit Inception Report of a) ESIA Addendum and b) Long Term Conservation Option with agreed TOR. Consultant will strictly follow the agreed schedule such as submission of the First Draft of ESIA Addendum Report on 8th, August 2016.
- iv. Greater emphasis should be given to public disclosure of documents.
- v. The Ministry of Energy and Mineral Development will share World Bank comments on ESIA Report with Consultant.
- vi. The consultant will refrain from referring or quoting confidential document in reports or otherwise without an express advance approval from World Bank and the Government of Uganda. The Aide Memoire(s) relevant to the assignment could be shared with the Consultant but not quoted or referred.

B: Consultation with the KOA Institutional Stakeholders during Inception Phase

I. Consultation with National Forest Authority Concerned Staffs: Date 1st June 2016, Venue: Office of NEMA, Kampala.

1. List of Participants

S.N.	Name	Title	Organization	Tel No.	E-mail
1.	Julius Ariho	M&E Specialist	NFA	0782-306100	arijol@yahoo.com
2.	Karuhanga K. Denis	DBA	NFA	0776835876	kkareetwa@gmail.com
3.	Gahma Stephen	Coor. National Forest Management (CNFM)	NFA	0772925762	stephenogahma@gmail.com
4.	Kabi Maxwell	Forest Utilization Specialist (FUS)	NFA	0782-453853	kabimaxwell@yahoo.com Maxkabi@nfa.org.ug
5.	Musingui Martin	Eco Tourism Specialist	NFA	0782017605	musimartinsb@yahoo.com musingui.m@nfa.org.ug
6.	James Ndimukulaga	CoFU	NFA	0772440087	jndimukulaga@gmail.com
7.	Levi Etmodu	DMF	NFA	0772581494	letwodn@yahoo.com
8.	Bruno Okiwir	P/M	NFA	0772673286	brunookwir@yahoo.com
9.	Rukunido Tom	ELARI	NFA	077259125	tomr@nfa.org.ug
10.	John Djisi	CGM	NFA	0772410523	johndjisi@gmail.com

2. Key Issues discussed

- Scope and conservation issues in KFS including Kalagala Central Forest Reserve (CFR), Nile Bank CFR, Mabira CFR, islands in Nile River and adjacent land lying 3-5 km on the either side of the Nile River bank. Mabira CFR is one of the CFRs forming the Mabira Ecosystem which is part of KOA, but it is outside the free flowing section of the Nile River forming part of KOA.
- Status of KOA Management Plan and its scope in second phase after 2019.
- Legal measures and funding source of managing CFRs and KOA
- Involvement of NFA on Isimba HPP planning and implementation
- And other aspects relevant to Project work.

II Consultation meeting with Uganda Electricity Generation Co. Ltd. (UEGCL), Date: 1st June 2016, Venue: Office of UGGCL, Kampala.

1. List of Participants

- Mr. Otim Moses - Principal Environment Specialist
- Mr. Alex Bwowe – Sociologist
- Mr. Francis Nyakura – Environment Officer
- **Mr. Moses Anguyo – Environment Engineer**

2. Key Issues Discussed

- Energy demand and supply, hydropower potential, and hydropower sector development in Uganda.
- Design alternatives for Isimba HPP such as maximum water level in reservoir and inundation area; reservoir operation level.
- Contour maps and other relevant maps of the project site.

III. Consultation Meeting with the MoWE, Date: 2nd June, 2016, Venue: Office of MoWE

1. Lists of Participants

- Mr. Duncan Kikoyo -
- Mr. Sukar Tom -
- Mr. David Cheptoek -

2. Key Issues Discussed

- The discussion covered water management in the backwater area of Isimba dam.
- Reservoir operation plan and relevant Nile River water management in the project area.

IV Consultation with Key Informants, MoEMD, Date: 6th June, 2016, Venue: MoEMD Office

1. Key Informant

- Mr. Moses Murengezi - Advisor on Energy, Energy and Mineral Sector Working Group Chairman

2. Key Issues Discussed

- Discussed the potential environmental and social impacts of the on-going Isimba Project on water bodies and riverbanks in KOA.
- Utilization of tourism assets in KOA; tourism related activities benefits to local community.

V Consultation with Key Informants, MoEMD, Date: 6th June, 2016, Venue: MoEMD Office

1. Key Informant

- Mr. A. Atwin - Engineer

2. Key Issues Discussed

- Information sharing with MoEMD and maintaining the confidentiality of the vital information on the Project; Consultant was instructed to send all the draft documents to MoEMD for review before sending to the World Bank.

VI. Consultation with Key Informants, MoWE, Date: 7^t June, 2016, Venue: MoWE Office

1. Key Informant

- **Mr. Julius Mafumbo**, Senior Environment Officer, key person implementing KOA Sustainable Management Plan (2010-2019).

2. Key Issues Discussed

- Discussed implementation of KOA Sustainable Management Plan; challenges facing implementation.
- Scope of work, legal measures, institutional arrangement and source of funding in the second phase of KOA Plan.
- Management of legally protected area, 100 m on both sides of the riverbank.
- Livelihood program in KOA.

VII. Consultation with Key Informants, , NEMA, Date: 8th June, 2016, Venue: NEMA Office Kampala

1. Key Informant

- **Mr. Waiswa** Ayazika Arnold, Director, Environment Monitoring and Compliance, NEMA, key person involved with the planning and implementation of environmental action plans

2. Key Issues Discussed

- Discussed about the status of EMP implementation in Isimba HPP.
- Implementation of environmental programs during project construction –compliance by Construction Contractor.
- Monitoring mechanism during construction and operation phase – functioning of multi-sector monitoring system.
- Financial and manpower constraints in monitoring activities.
- Activities in KOA by Tour Operators.
- On-going amendment in EIA Act and related regulatory measures.

VIII. Consultation with Key Informants, MoTWA, Date: 8th June, 2016, Venue: MoTWA, Kampala

1. Key Informant

- Ms. Grace Mbabazi Aulo, Commissioner, Commissioner MoTWA

2. Key Issues Discussed

- Discussed about the adventure tourism assets in Nile River, its islands and in KOA - potential impacts of Isimba HPP on tourism.
- Compensatory tourism mitigation measures such as expanding tourism area in KOA, community infrastructure development, and promotion of nature and social tourism in KOA - Nile River and adjoining area.
- Role of Ministry of Tourism, Wildlife and Antiquities' on tourism development in KOA; institutional arrangement and financial resources.

IX Consultation with Key Informants, District Office, Kayunga district Date: 28th May 2016, Venue: District Office, Kayunga District

1. Key Informant

- Mr. Patrick Musaazi, District Environment Officer, Kayunga district,

2. Key Issues Discussed

- Location of rapids and falls across Nile River, Tourism Facilities,

- Distribution .of CFR within district on KOA
- Implementation status of KOA SMP and progress made
- Issue related to KOA SMP implementation

X Consultation with Key Informants, District Office, Jinja District Date: 29th May 2016, Venue : District Office, Jinja District

1. Key Informant

- Mr. Moses Maganda, District Environment Officer, Jinja District,

2. Key Issues Discussed

- Location of rapids and falls across Nile River, Tourism Facilities,
- Distribution .of CFR within district on KOA
- Implementation status of KOA SMP and progress made
- Issue related to KOA SMP implementation

XI Consultation with Key Informants, District Officials, Buikwe District on 29th May 2016, at the District Office, Buikwe District

2. Key Issues Discussed

- Tourism Facilities,
- Distribution .of CFR within district
- Implementation status of CRF SMP and progress made
- Issue related to CRFSMP implementation

B: Consultation with the KOA Institutional Stakeholders during Inception Phase

I. Consultation with National Forest Authority Concerned Staffs: Date 1st June 2016, Venue: Office of NEMA, Kampala.

1. List of Participants

S.N.	Name	Title	Organization	Tel No.	E-mail
1.	Julius Ariho	M&E Specialist	NFA	0782-306100	arijol@yahoo.com
2.	Karuhanga K. Denis	DBA	NFA	0776835876	kkareetwa@gmail.com

3.	Gahma Stephen	Coor. National Forest Management (CNFM)	NFA	0772925762	stephenogahma@gmail.com
4.	Kabi Maxwell	Forest Utilization Specialist (FUS)	NFA	0782-453853	kabimaxwell@yahoo.com Maxkabi@nfa.org.ug
5.	Musingui Martin	Eco Tourism Specialist	NFA	0782017605	musimartinsb@yahoo.com musingui.m@nfa.org.ug
6.	James Ndimukulaga	CoFU	NFA	0772440087	jndimukulaga@gmail.com
7.	Levi Etmodu	DMF	NFA	0772581494	letwodn@yahoo.com
8.	Bruno Okiwir	P/M	NFA	0772673286	brunookwir@yahoo.com
9.	Rukunido Tom	ELARI	NFA	077259125	tomr@nfa.org.ug
10.	John Djisi	CGM	NFA	0772410523	johndjisi@gmail.com

2. Key Issues discussed

- Scope and conservation issues in KOA including Kalagala Central Forest Reserve (CFR), Nile Bank CFR, Mabira CFR, islands in Nile River and adjacent land lying 3-5 km on the either side of the Nile River bank. Mabira CFR is one of the CFRs forming the Mabira Ecosystem which is part of KOA, but it is outside the free flowing section of the Nile River forming part of KOA.
- Status of KOA Management Plan and its scope in second phase after 2019.
- Legal measures and funding source of managing CFRs and KOA
- Involvement of NFA on Isimba HPP planning and implementation
- And other aspects relevant to Project work.

II Consultation meeting with Uganda Electricity Generation Co. Ltd. (UEGCL), Date: 1st June 2016, Venue: Office of UGGCL, Kampala.

1. List of Participants

- Mr. Otim Moses - Principal Environment Specialist
- Mr. Alex Bwowe – Sociologist
- Mr. Francis Nyakura – Environment Officer
- **Mr. Moses Anguyo** – Environment Engineer

2. Key Issues Discussed

- Energy demand and supply, hydropower potential, and hydropower sector development in Uganda.
- Design alternatives for Isimba HPP such as maximum water level in reservoir and inundation area; reservoir operation level.
- Contour maps and other relevant maps of the project site.

III. Consultation Meeting with the MoWE, Date: 2nd June, 2016, Venue: Office of MoWE

1. Lists of Participants

- Mr. Duncan Kikoyo -
- Mr. Sukar Tom -
- Mr. David Cheptoek -

2. Key Issues Discussed

- The discussion covered water management in the backwater area of Isimba dam.
- Reservoir operation plan and relevant Nile River water management in the project area.

IV Consultation with Key Informants, MoEMD, Date: 6th June, 2016, Venue: MoEMD Office

1. Key Informant

- Mr. Moses Murengezi - Advisor on Energy, Energy and Mineral Sector Working Group Chairman

2. Key Issues Discussed

- Discussed the potential environmental and social impacts of the on-going Isimba Project on water bodies and riverbanks in KOA.
- Utilization of tourism assets in KOA; tourism related activities benefits to local community.

V Consultation with Key Informants, MoEMD, Date: 6th June, 2016, Venue: MoEMD Office

1. Key Informant

- Mr. A. Atwin - Engineer

2. Key Issues Discussed

- Information sharing with MoEMD and maintaining the confidentiality of the vital information on the Project; Consultant was instructed to send all the draft documents to MoEMD for review before sending to the World Bank.

VI. Consultation with Key Informants, MoWE, Date: 7^t June, 2016, Venue: MoWE Office

1. Key Informant

- Mr. Julius Mafumbo, Senior Environment Officer, key person implementing KOA Sustainable Management Plan (2010-2019).

2. Key Issues Discussed

- Discussed implementation of KOA Sustainable Management Plan; challenges facing implementation.
- Scope of work, legal measures, institutional arrangement and source of funding in the second phase of KOA Plan.
- Management of legally protected area, 100 m on both sides of the riverbank.
- Livelihood program in KOA.

VII. Consultation with Key Informants, , NEMA, Date: 8th June, 2016, Venue: NEMA Office Kampala

1. Key Informant

- **Mr. Waiswa** Ayazika Arnold, Director, Environment Monitoring and Compliance, NEMA, key person involved with the planning and implementation of environmental action plans

2. Key Issues Discussed

- Discussed about the status of EMP implementation in Isimba HPP.

- Implementation of environmental programs during project construction – compliance by Construction Contractor.
- Monitoring mechanism during construction and operation phase – functioning of multi-sector monitoring system.
- Financial and manpower constraints in monitoring activities.
- Activities in KOA by Tour Operators.
- On-going amendment in EIA Act and related regulatory measures.

VIII. Consultation with Key Informants, MoTWA, Date: 8th June, 2016, Venue: MoTWA, Kampala

1. Key Informant

- Ms. Grace MbabaziAulo, Commissioner, Commissioner MoTWA

2. Key Issues Discussed

- Discussed about the adventure tourism assets in Nile River, its islands and in KOA - potential impacts of Isimba HPP on tourism.
- Compensatory tourism mitigation measures such as expanding tourism area in KOA, community infrastructure development, and promotion of nature and social tourism in KOA - Nile River and adjoining area.
- Role of Ministry of Tourism, Wildlife and Antiquities' on tourism development in KOA; institutional arrangement and financial resources.

IX Consultation with Key Informants, District Office, Kayunga district Date: 28th May 2016, Venue: District Office, Kayunga District

1. Key Informant

- Mr. Patrick MUSAZI, District Environment Officer, Kayunga district,

2. Key Issues Discussed

- Location of rapids and falls across Nile River, Tourism Facilities,
- Distribution .of CFR within district on KOA
- Implementation status of KOA SMP and progress made
- Issue related to KOA SMP implementation

X Consultation with Key Informants, District Office, Jinja District Date: 29th May 2016, Venue : District Office, Jinja District

1. Key Informant

- Mr. Moses Maganda, District Environment Officer, Jinja District,

2. Key Issues Discussed

- Location of rapids and falls across Nile River, Tourism Facilities,
- Distribution .of CFR within district on KOA
- Implementation status of KOA SMP and progress made

- Issue related to KOA SMP implementation

XI Consultation with Key Informants, District Officials, Buike District on 29th May 2016, at the District Office, Buike District

2. Key Issues Discussed

- Tourism Facilities,
- Distribution of CFR within district
- Implementation status of CRF SMP and progress made
- Issue related to CRFSMP implementation

C. Persons and Institutions consulted during Addendum ESIA

1. Ministry of Energy & Mineral Development (MoEMD)

i). Persons /Officials Interacted

- Mr. James Banaabe
- Mr. Abdon Atwine
- Ms. Scovia Nakawuma
- Permanent Secretary
- Mr. Moses Murengezi
- Ms. Carol Aguti

ii). Key Issues Discussed

- Brief on consultancy
- Role of MEMD in SMP Implementation
- Discussion on KOA LTCO institutional arrangements and financing

2. Ministry of Justice & Constitutional Affairs (MoJCA)

i). Persons/Officials Interacted

- The Solicitor General
- The First Parliamentary Counsel

ii). Key Issues Discussed

- KOA SMP

3. Ministry of Water & Environment (MoWE)

i). Persons/Officials Interacted

- Mr. Mark
- Mr. Julius Mafumbo

- ii) *Key Issues Discussed*
 - KOA SMP Implementation
 - Limitations of the current Institutional arrangements
 - Major achievements
 - Opinion on LTCO.

4. National Forest Authority (NFA)

- i) *Persons/Officials Interacted*
 - Mr. Tom Rukundo
 - Mr. Maxwell Kabi
- ii) *Key Issues Discussed*
 - Role of NFA in the KOA SMP
 - Sustainable financing of the LTCO

5. National Environment Management Authority (NEMA)

- i) *Persons/Officials Interacted*
 - Arnold Waiswa (Director Environmental Monitoring and compliance)
- ii) *Key Issues Discussed*
 - Role of NEMA in KOA SMP
 - Opinion on alternative KOA offset area
 - Opinion on LTCO

6 Ministry of Tourism, Wildlife and Antiquities (MoTWA)

- i) *Persons/Officials Interacted*
 - Grace AuloMbabazi (Commissioner Tourism)
 - Lyazi Vivian (Principle Tourism officer)
 - Solomon Ssekitoleko (Head Research - Uganda Tourism Board)
- ii) *Key Issues Discussed*
 - *Tourism operations in KOA*
 - *Potential of tourism in KOA*
 - *Role of MoTWA in KOA SMP implementation and monitoring*
 - *Opinion on alternative Offset area for KOA*
 - *Opinion on LATCO*

7. National Fisheries Resources Research Institute (NAFIRRI)

- i) *Persons/Officials Interacted*
 - Dr. Ogutu
 - Mr. Natugonzo Viamy
- ii) *Key Issues Discussed*
 - Fishery in Victoria Nile
 - Implications on fishery due to hydropower development
 - Mitigation options
 - Opinion on alternative offset area
 - opinion on LATCO

8. Consultant IUCN team that developed KOA management plan and Kalagala-Itanda Ecotourism Plan

- i) *Persons/Officials Interacted*
 - Alex Muhwezi (Future Dialogues International)
- ii) *Key Issues Discussed*
 - Concept behind the KOA SMP and various management plans including ecotourism
 - Tourism potential on KOA
 - Future plans for ecotourism at KOA
 - Opinion on alternative KOA Offset
 - Opinion on LATCO

9 Tourism Operators

- i) *Persons/Officials Interacted*
 - Leslie Carvell - Nile River Explorers
 - Richard (Camp Supervisor) - Nile River Explorers
 - Kagere Joshua (Senior Rafting guide) - Nile River Explorers
 - Camp Manager - Adrift River Base Camp
 - Prossy Mirembe (Proprietor) - White Nile Rafting
 - Herbert Byaruhanga - Chairman Birding Uganda and Uganda Safari Guides Association
 - BabraAdoso (Chairperson) - Association of Uganda Tour Operators (AUTO)
 - Group of 13 rafting guides - Nile River Explorers
 - Muhammad (Former Local Site guide) - Bujagali
 - Godfrey (Local Site guide) - Itanda Falls
 - 3 Workers at Hairy Lemon Lodge - Hairy Lemon
 - Mbonera (Administrator Ndugu Africa Creamics/community camp site) - Kalagala
 - Joseph (Lodge Manager) - Haven Lodge
 - Jeff Bidandi - Save Adventure Tourism in Uganda (SATU)
- ii) *Key Issues Discussed*
 - Ongoing tourism business, tourist flow and income streams
 - Future tourism potential

- implication of IHPP on tourism business
- Opinion on alternative KOA offset area
- Mitigation alternatives for the IHPP implications on tourism

10 Fishermen of Victoria Nile Upstream and Downstream KOA

i) *Persons/Officials Interacted*

- Kitimbo Charles
- Bwire Daniel
- Tabongho Wilber
- Kagwa Mark
- Tenywa Charles
- Ojambo Joseph
- Okware Joseph
- Owino Zerubaberi

ii) *Key Issues Discussed*

- Fish diversity and catch in the recent years
- Fish diversity and catch in the past
- Implication on fish diversity and catch due to hydropower projects upstream

11. Key Informants and Issues Discussed

Key Informant Interviewed	Issues Discussed	Options Identified/ suggested	Designation of the Person
Kiggundu Vincent	Livelihood strategies Anticipated opportunities for households	Value addition - Initiate agro-processing to add value to agricultural products/output Support alternative fuel energy adoption to mitigate effects of current deforestation activities along the river banks in search for firewood	Progressive Farmer
Batambuze Adam	Fishing as an economic activity Challenges encountered Anticipated positive and negative impacts of the KoA	Fish farming to mitigation effects of the project on current fishing activities. Proposes establishment of fish ponds close to the river banks so people do not necessarily have to depend on the river as a source of fish	Local fisherman
Mulindwa	Benefits derived from water transportation Challenges	Support boat operators acquire boat engines to ease the current challenge of hand rowing	Boat operator and owner

Key Informant Interviewed	Issues Discussed	Options Identified/ suggested	Designation of the Person
	encountered		
Ssali Robert	Compensation of affected persons Social service availability and access in the sub county Mitigation of project impacts	Infrastructural improvement, especially education to improve literacy and skills levels in the affected communities Extension of rural electrification services for value addition for farmers	Sub county Councilor
Nakayenga Florence	Social and Economic characteristics of Nazigo sub county Status of social services delivery institutions in the sub county	Sensitization of communities to easily embrace the project and other development initiatives in support of household livelihoods Improve health service delivery beyond the current sub county level based health service provision Ensure prompt and fair compensation for the affected households	Sub county Chief
Basangwa David	Effects of the Project on the cultural sites located along the river banks Mitigation of negative impacts of the project on the cultural sites	Work with cultural/ spiritual leaders to relocate the affected cultural sites to identified locations	Cultural Leader

12. Focus Group Discussions

A total of 19 focus group discussions were conducted during the course of the study at the local area spatially covering the KOA affected areas and KFS Extension areas. The place of Focus group discussions and the date of FDG is presented in the Table below: *Summary record of Focus Group Discussions held, Village, Number of Participants and Dates*

Areas of FGD	Name of Village	No. of Participants	Dates conducted
IHPP KFS Affected Area			
	Kitambuza	11	Sept. 02, 2016

Areas of FGD	Name of Village	No. of Participants	Dates conducted
	Nakaato	12	Sept. 10, 2016
	Bumegere	15	Sept. 10, 2016
	Namalumba	12	Sept. 10, 2016
	Kalagala	10	Sept. 02, 2016
KFS Extension Area			
	Kasambya	10	Sept. 06, 2016
	Bukasa	12	Sept. 06, 2016
	Namakandwa	10	Sept. 03, 2016
	Namiyagi	12	Sept. 06, 2016
	Kirugu-Wakikoola	11	Sept. 02, 2016
	Wakikoola A	17	Sept. 05, 2016
	Nankwanga	14	Sept. 04, 2016
	Nabukosi Central	12	Sept. 07, 2016
	Busowoko-Bweigamye	09	Sept. 09, 2016
	Busowoko Central	09	Sept. 09, 2016
	Wakisi Market	14	Sept, 05, 2016
	Wakisi Central	11	Sept. 04, 2016
	Kikubamutwe	10	Sept. 04, 2016
	Bubugo-Bulondo	12	Sept. 07, 2016

i) Persons participating in the FDG Meetings

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 6, 2016
Venue KASAMBAYA

Name	Organization	Designation TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
WABUYI MARK	KASAMBAYA	DMUTAKA	<input checked="" type="checkbox"/>		0783900079	Wabuyi	52
Kapuse golori	Kasambaya	MUTIZZE	<input checked="" type="checkbox"/>		0774900452	Kapuse	F
WABUYI	Kasambaya	DMUTIZZE	<input checked="" type="checkbox"/>		078675703	Wabuyi	
Mugoda michael	Kasambaya	DMUTIZZE	<input checked="" type="checkbox"/>		0774035599	Mugoda	
MARGRET Kweheba	Kasambaya	DMUTIZZE		<input checked="" type="checkbox"/>	0789460921	Margret	
MABUKORDE	Kasambaya	DMUTIZZE		<input checked="" type="checkbox"/>	0775148454	Mabukorde	

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
AJIM JUDITH	Kasambaya		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	xxx - - - -	Ajim	49
Kyaka	Jame			<input checked="" type="checkbox"/>	07033001737	Kyaka	3
Rose	Nambogo		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0773444253	Rose	
KIZZA Joseph	KASAMBAYA	C/MAN L.I	<input checked="" type="checkbox"/>		0774639629	Kizza	

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 7, 2016
Venue BUBUGO BULONDO

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
WALUSIMBI JONAALI	BUBUGO BULONDO	V.H.T	<input checked="" type="checkbox"/>		0774729374	Walusimbi	
BYAKIKA SABASI	BUBUGO BULONDO	Resident	<input checked="" type="checkbox"/>		0783286017	Byakika	
MWANGU PETER	BUBUGO BULONDO	Resident	<input checked="" type="checkbox"/>		0785030924	Mwangu	
MUKAMA FRED	BUBUGO BULONDO	"	<input checked="" type="checkbox"/>		0777672852	Mukama	
SULINKABA SAADI	BUBUGO BULONDO	C/MAN LCI	<input checked="" type="checkbox"/>		0774039015- 0758766198	Sulinkaba	
WAIGONDA SAADI	BUBUGO BULONDO	"	<input checked="" type="checkbox"/>			Waigonda	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
			M	F		
Byabasaka DANIEL	VILLAGE BUBUNGO BULONDO	Resident	<input checked="" type="checkbox"/>		0774 894501 0758894501	[Signature]
Salim	MABA Baya	Do	<input checked="" type="checkbox"/>			[Signature]
Mulongo	Ronard	RES ✓	<input checked="" type="checkbox"/>		0731043190	[Signature]
NABIRI JALIAI	BUBUNGO BULONDO	"		<input checked="" type="checkbox"/>		NT
NABUDWA JANET	"	"		<input checked="" type="checkbox"/>		Nabudwa Janet
TIBITA SAIDA	BUBUNGO BULONDO	"		<input checked="" type="checkbox"/>		Tibita Saida

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date: 24.2.2016
Venue: Kalagala PS

Name	Organization	Designation DUTY/RESPONSIBILITIES	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	AGE
			M	F			
NIAMBSE REARICE	VILLAGE KALAGALA	community member		<input checked="" type="checkbox"/>	0779730337	[Signature]	3
Kiggundu Christina	Kalagala	community member		<input checked="" type="checkbox"/>	0779-362339	[Signature]	5
MASAMBU MIFASI KITIMBO	KALAGALA VILLAGE	Opinion Leader	<input checked="" type="checkbox"/>		0773036918	[Signature]	
GIMEYI SPERITO	KALAGALA	G. SEC KALAGALA H.C.F	<input checked="" type="checkbox"/>		0783288075	[Signature]	
HAMUKA Agatha	KALAGALA	Culture Leader		<input checked="" type="checkbox"/>	0750414894	[Signature]	
EUBAULE mesias	Kalagala	Kalagala	<input checked="" type="checkbox"/>		0702084632	[Signature]	
DARIQUE Abubakala	Kalagala		<input checked="" type="checkbox"/>		0782-384172	[Signature]	50
Kato Sonathan	Kalagala		<input checked="" type="checkbox"/>		0779449694	[Signature]	43
AKISA Yabuhie	Kalagala		<input checked="" type="checkbox"/>		0777552596	[Signature]	6
KANAYO MATHIAU	Kalagala		<input checked="" type="checkbox"/>		0772-900259	[Signature]	5

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 4, 2016
Venue Kikubamutye near

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
Wanjie Peter	Kikubamutye	G/Secy	<input checked="" type="checkbox"/>		0752539850 0772		49
NTUHO RASHID	KIKUBAMUTYE	TRADER	<input checked="" type="checkbox"/>		0782958646		40
Kakije Stephen	Kikubamutye	Trader	<input checked="" type="checkbox"/>		0782369653		40
matwalibi Kagusia	"	TRADER	<input checked="" type="checkbox"/>		0757969347		46
Bekachi Jowali	"	deffence	<input checked="" type="checkbox"/>		0773425654 0703914382		45
Birungi Shairah	"			<input checked="" type="checkbox"/>	0757088333		

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
			M	F		
NAKIMULI Mariam	KIKUBAMUTYE	V.HT		<input checked="" type="checkbox"/>	0782055259 0705600731	
Ahi Kialuwa	KIKUBAMUTYE	Residence	<input checked="" type="checkbox"/>		0701648295	
ASIMWA Fahuka	"	Residence	<input checked="" type="checkbox"/>		0701690058	
NAKIGULDE Hadije	"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0789228920	
FATUMA NAKIBWKA	"	Farmer		<input checked="" type="checkbox"/>	0774315824	

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 5, 2016
Venue Nakisi Central

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
			M	F		
1 MANGENI KEFA	Wakisi Central Village	C/MANAGER	<input checked="" type="checkbox"/>		0718-820542	
2 WANDERA SAMUEL GILBERI	"	Resident	<input checked="" type="checkbox"/>		072183814	
3 MATENDE JACKSON	"	"		<input checked="" type="checkbox"/>	07725514827	Matende
4 UDAYA NAMUSOKI	"	"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0782639790	
5 DAMBA MUNICA	"	"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0787711432	
6 JALIA KAVIMBO	"	"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
1	Nabwire Jane	Wakisi Central Village	Resident		F	0773-086852	Nabwire
2	MUGENI PETERSON	"	Resident	M		0754-055743	[Signature]
3	KISSAMBU AFANI	WAKISI Central Village	"	M		0794 181475	Amulheli
4	MAGOLO JSMAIL	Wakisi Central	"	M		0779-359722	[Signature]
5	RUWENBARO RUDALA	WAKISI Central	"	M		0751932806	[Signature]

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date: Sept 5, 2016

Venue: Wakisi Market

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
1	MUKWANA S.	WAKISI market	Sec LCI	✓		0774982814	[Signature]
2	Bakumbira M	wakisi market	C/P NRM	✓		0782797780	[Signature]
3	Kamba Rajabu	wakisi market		✓		0757367487	[Signature]
4	WANDIGA ZUBOIA	Wakisi Market	V. U. W	✓		0709585002	[Signature]
5	SIGAMBARA ARON	Wakisi Market	Chairman	✓		0759519636	[Signature]
6	KATO RITOM	Wakisi		✓		0777514467	[Signature]
7	KATO STEPHEN	WAKISI MARKET	IC	✓		0775 184237	[Signature]
8	OLUMU CHRISTOPH	market	Chairman	✓		0706209447	[Signature]
9	Kawidua M	wakisi market		✓		0783065320	[Signature]
10	NAMPILWA Kania	Wakisi market		✓		0785355767	[Signature]
11	MUSUBIKA BARON	wakisi market	Lay leader	✓		0758923482	[Signature]
12	Maziwa Zamu	wakisi market	mwimi	✓		-	[Signature]
13	Natabi Jovva	Wakisi market		✓		0701300631	[Signature]
14	BWIRE ALI	market		✓		077310605	[Signature]

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date: _____

Venue: BUSOOWO CENTRAL

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
				M	F			
	MUYEMBA SULA	BUSOOWO CENTRAL	CI/M LCI CENTRAL	M		0785299070	[Signature]	53
	Mutulungu Okoth	BUSOOWO	central	M			[Signature]	59
	MUTARU MUSA	BUSOOWO	V. CC/M	M		0775445994	[Signature]	31
	JEFFU WEREMIA	BUSOOWO	MUSOBUZI	M		0752358317 0782-.....	[Signature]	60
	Kiwanuka Jovid	BUSOOWO	F.M.	M		0701492673	[Signature]	51
	BATANTE HENRIE	BUSOOWO	F.M.	M		0789702984	[Signature]	5

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
				M	F			
	Mugwani Lantana			✓		0776862665	[Signature]	75
	Edamula [unclear]				✓	0771820743	[Signature]	41
	ALYINZA				✓		[Signature]	44

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date 09/09/2016

Venue BWEGAMYE

Name	Organization	Designation TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
Mutahiri George Bwegamye			M		0752 64 78 70	[Signature]	61
Misingana Bwegamye		member	M		0788622757	[Signature]	62
SANGA	STEPHEN			✓	0778895148	[Signature]	41
LUBALE	Bwegamye	youth	M		0752850398	[Signature]	37
NAMBALA REBECCA	BWEGAMYE	MEMBER	F	F	0775437596	[Signature]	43
KAMWI DHIWA	BWEGAMYE	MEMBER		✓	0773842028	[Signature]	5

Name	Organization	Designation TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
NGOBI ELINA	BWEGAMYE	MEMBER MEMBER	✓		0752676500	[Signature]	32
Annet Mulamba	Bwegamye	Member		✓		[Signature]	30
Bethaga	Bwegamye	ch LCI		✓	0779086360	[Signature]	31

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date 09/09/2016

Venue NABUKOSI CENTRAL

Name	Organization	Designation TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
KALUDI CHARLES	NABUKOSI CENTRAL	C/MAN LCI	M		0799542376 070534779	[Signature]	47
BWILISO WILSON	NABUKOSI CENTRAL	C/MAN LCI	M		0753044466 0763044466	[Signature]	
KART FRANCIS	NABUKOSI CENTRAL	C/MAN LCI	M		0773100202 0752100205	[Signature]	52
NAMUNYOMBA OLIVA	NABUKOSI CENTRAL	VILLAGER		F		N.O.	45
NAIRUBA FATINA	NABUKOSI CENTRAL				0771879562		
Gombe irele	NABUKOSI CENTRAL			✓		[Signature]	
Rehana Kadung	Nabukosi			✓		[Signature]	
KULUDI SIDONA	NABUKOSI CENTRAL			✓	0799542376	[Signature]	
IKI TIMBO	NABUKOSI CENTRAL			✓		[Signature]	
Lubega A	Nabukosi C			✓	0771810171	[Signature]	
Batanga Sam	Nabukosi C	VIC/PERSON	M		0775329673	[Signature]	
GABAGANI SIRIMANI	NABUKOSI CENTRAL	SEC LCI	M		0784032415	[Signature]	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

CONSULTANCY FOR THE ASSESMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date: 4/9/16
Venue: NANKWANGA VILLAGE (V/C's Compound)

Name	Organization / VILLAGE	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
Mukalina G. Nankwanga	"	Defence	M		0755987117	Mukalina	60
OJambu G.	"	RESIDENT	M		0772183175	OJambu	38
Nalanga Nkhata	"	"		F	0782703167	Nalanga	65
Hanya Lutsumu	"	Resident	M		0701320136	Hanya	
Szalongo Wakabi	"	- DO -	M		0782518824	Szalongo	
WANGWE HUSEIN	"	-	M		0754298126	Husein	
BYEKWASO	NANKWANGA	N	M		0774427535	BYEKWASO	
Nansubuga	"	Resident		F	0777505664	Nansubuga	
Nekesa	"	Resident		F		Nekesa	
NOSTIA HARISA	"	Vic chairperson V/C Nankwanga	M		0702542027 0782542027	NOSTIA	
Mubondo	"	Resident	M		0777181533	Mubondo	
OJambu	"	Resident	M		0754172353	OJambu	
Joad Damba	"	"	M		0792423778	Joad	
VICENSE BALAM	"	Resident	M		0782237354	Vicense	

WAKIKOOLA A

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
1. MUKOOLO M	WAKIKOOLA A	Peasant	M		0752978863	MUKOOLO	86
2. KASAJIA SIBAZI	WAKIKOOLA A	V.H.T	M		0751911020	KASAJIA	53
3. MASHO JAMES	WAKIKOOLA A	PEASANT	M			MASHO	50
4. LWANGA RAJAB	WAKIKOOLA A	BARBARO	M		0755667341	LWANGA	23
5. SANDE RONALD	WAKIKOOLA A	PEASANT	M		0751563366	SANDE	33
6. Nassaka Maria	"	PEASANT	F		0785906189	Nassaka	30
7. Mankwanga L.	WAKIKOOLA A	PEASANT	M		0773427356	Mankwanga	46
8. Fatuma MUKOOLO	"	"	F		0753978863	Fatuma	50
9. OUMA TOBI	"	"	M			OUMA	83
10. MAGALA UMAR	"	Resident	M		0757609262	MAGALA	35
11. BWIRE G.F	WAKIKOOLA A	Peasant	M		0753596233	BWIRE	30
12. S.S. JEMVA M	"	Peasant	M		0758421186	S.S. JEMVA	37
13. Nansubuga	SABAH	Peasant	F		0757426856	Nansubuga	3
14. Jacoba	WAKIKOOLA A	"	M			Jacoba	
15. ABUDALKA	KAWESA	"			0755869919 077739461	ABUDALKA	
16. MUBWANA	RIKHA	"				MUBWANA	
17. MANSI SALUMA	"	"				MANSI	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date 02/09/2016
Venue KIRUGU - WAKIKOOLA

Name	Organization Village	Designation Title	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
Sande Stevens	Kirugu W	Farmer	<input checked="" type="checkbox"/>		0776-076686		48
Nabakazi C	Kirugu W	Farmer		<input checked="" type="checkbox"/>	0777013185		33
Nabwire A	Kirugu W	Farmer		<input checked="" type="checkbox"/>	0750700424		54
NABWIRE BERNARD	Kirugu Wakola	Farmer		<input checked="" type="checkbox"/>	0776-892156		34
LITAKA GERARD	KIRUGU W.	Farmer		<input checked="" type="checkbox"/>	0777683764		48
MaSahali	Kirugu	farmer		<input checked="" type="checkbox"/>	0757421812		4
ETOMEI PESTO	KIRUGU-W.	V.H.O.S	<input checked="" type="checkbox"/>		076600392		53
OROMU DAVID	"	FARMER	<input checked="" type="checkbox"/>		075838097		43
OKONIGO JACKSON	KIRUGU W.	FARMER	<input checked="" type="checkbox"/>		0774467349		59
ALBERTI MAKHA	"	FARMER	<input checked="" type="checkbox"/>		0783801304		57
DUMA SILVANO	KIRUGU WAKIKOOLA	CHAIRPERSON LCI	<input checked="" type="checkbox"/>		0774710675		

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 6, 2016
Venue Namiyagi

Name	Organization Village	Designation Title	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
Kalegeya Edward	Namiyagi	Peasant Farmer	M	<input checked="" type="checkbox"/>	0775-924862		67
JSMAIL	NAMIYAGI	PEASANT	M		-		
PRAMANZAVI	NAMIYAGI		M				
MATIBA MARIANA	NAMIYAGI	PEASANT	M	F	0757799040		
NABWENDE KAMUHATI	NAMIYAGI		M	F	-		
TNAMISSA HAJIRA	NAMIYAGI		M	F	-		
NAGUDI	NAMIYAGI			F	0772409957		

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AUMA CHRISTINE	NAMI-JAGI		f	F	0783437163		38
MAMUSISI SAFINA	NAMI-JAGI		f	F	-		
NAKWANGA ALISI	NAMI-JAGI		f	F	-		
BESIMYE HAWA	NAMI-JAGI		f	F	0783690085		
NAGUNDI JAMILA			f	F			
ANINA MUSA ^{Lo}	NAMI-JAGI		f	F	0704784227		

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date Sept 02, 2016

Venue Namakandwa

Name	Organization	Designation ROLE/ RESPONSIBILITIES	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	AGE
			M	F			
KIMBERLINGA	VILLAGE	Chairman	<input checked="" type="checkbox"/>		0774426429		75
SAMBE WILSON	NAMAKANDWA	V.H.T	<input checked="" type="checkbox"/>		0725668263		46
NAMAMBO MAXENSA	NAMAKANDWA	V.H.T		<input checked="" type="checkbox"/>	0775041411		5
NAKIGANDAR	NAMAKANDWA	Y.C.P		<input checked="" type="checkbox"/>	073545075		5
NAGUNDI	NAMAKANDWA	BEN. SEC		<input checked="" type="checkbox"/>	0782399328		4
MADUYI HIRASI	NAMAKANDWA		<input checked="" type="checkbox"/>		0772394259		
BYAMAKU VIKIITA	NAMAKANDWA		<input checked="" type="checkbox"/>				62
KANEWE LOZLYO			<input checked="" type="checkbox"/>				
IKAYEMBA			<input checked="" type="checkbox"/>				
NAMUSISI Alice	Namakandwa			<input checked="" type="checkbox"/>	0784848251	N.A	52

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date Sept 6, 2016

Venue BUKASA

Name	Organization / VILLAGE	Designation / TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
1. Nalumenya							
1. Zevilio	BUKASA		<input checked="" type="checkbox"/>		0757274167	Nalumenya	75
2. HASWA	Bukasa						
2. Tony			<input checked="" type="checkbox"/>		0774748929	HASWA	24
3. Nakibira Mily	BUKASA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0788332151	Nakibira	49
f. Florence Batumbya	BUKASA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0772921079	Florence	46
5. Lovinson Juuko	Bukasa		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0779448988	Lovinson Juuko	50
6. BISASO	Bukasa						
	→ Livingstone		<input checked="" type="checkbox"/>		0773525400	BISASO	35

	Name	Organization	Designation <i>TITLE</i>	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	AGE
				M	F			
7	Gizamba Francis	Bukasa		<input checked="" type="checkbox"/>			<i>Gizamba Francis</i>	67
8	Augustine Buhuse	BUKASA		<input checked="" type="checkbox"/>			<i>Augustine</i>	52 years
9	NAMUSISI FLORENCE	BUKASA	0788377965		<input checked="" type="checkbox"/>		<i>NAMUSISI</i>	28 years
10	KIFERERA Aulusiine	Bulasa	Secretary 0772971866	<input checked="" type="checkbox"/>		0772971866	<i>Kiferera</i>	33
11	Mpelodoma B	Bulasa		<input type="checkbox"/>			<i>MPB</i>	73 years
12	Mulindwa Leopold	Bulasa	0778437138	<input type="checkbox"/>			<i>Mulindwa</i>	70 years

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CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 2, 2016
Venue Kitambuzi

Name	Organization Village	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	Age
			M	F			
WAMONO MUSE	Kitambuzi	Citizen	✓		0794714248	<i>[Signature]</i>	40
KLEPULU CHARO	Kitambuzi	Youth	✓		0773681840	<i>[Signature]</i>	30
DADA RONALD	Kitambuzi	Member	✓		0773517794	D.R.	30
WAMERA SLOVA	Kitambuzi	Member	✓		0781589962	W.S	20
Mabonga	Kitambuzi	VIC	✓		-	<i>[Signature]</i>	49
MUKETA JANET	Kitambuzi	member		✓	0785211397	M.J	35
Kituyi ALICE	Kitambuzi	member		✓	-	K.A	
Wambuzi Gaudy	Kitambuzi	C.N.A.M	✓		-	<i>[Signature]</i>	
TUSUBILO MARIAM	Kitambuzi	member	✓	✓	0781337581	<i>[Signature]</i>	
Janet Kituyi	Kigayaza	member	✓	✓	-	J.K	
Nansubuga Jane	Kigayaza	member		✓	0703020508	N.J	

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA
Participants Met Attendance Sheet

Date Sept 10, 2016
Venue BUMEGERE

Name	Organization VILLAGE	Designation TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	AGE
			M	F			
Mwagala G.	Bumegere	Peasant	M		0771008076/0756901168	<i>[Signature]</i>	61
MWASE JONAH	Bumegere	Peasant	M		075036141	<i>[Signature]</i>	41
Naimed Jean	Bumegere	Peasant		F		<i>[Signature]</i>	46
MUKYALAH	Bumegere			F		<i>[Signature]</i>	60
Nalabi	Bumegere	peasant	M			<i>[Signature]</i>	36
Nabirye	Bumegere	peasant	M			<i>[Signature]</i>	58
MUKOLA	Bumegere	"	M			<i>[Signature]</i>	45
Adubyezi	"	"	M			<i>[Signature]</i>	42
BALISURU	BUMEGERE	C.D. N.T.	M		-	<i>[Signature]</i>	50
Wagubw	Habibu	-				<i>[Signature]</i>	
OWIRO	Bumegere	Peasant	M	F	-	<i>[Signature]</i>	
BA SAIKU	Bumegere	Peasant	M	F	0779933514	<i>[Signature]</i>	
Shoro Alex	Bumegere				0774187492	<i>[Signature]</i>	
KANYIAGA	YAMVA	C.MANK. CIT M				<i>[Signature]</i>	
Mere	Edirisa	Peasant	M		0786450947	<i>[Signature]</i>	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

NAMALUMBA LCI - ATTENDANCE SHEET

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
			M	F		
Mutanda Grace		Open W/ed	M		0788899767	[Signature]
MUSISI SONKO		Leader	M		0751835521	[Signature]
MUSIHYO FRED		Member	m		0782670884	[Signature]
NANGABI REBE		member	m	F	0757131235	Nangabi
Ryansi Agnes		member	F		0720748366	[Signature]
NANSAANO KEVIN		Former councillor	F	F	0706242457	Nansaano
KIANSWA JOHN		OPINION leader	m		0776867756	Kianswa
Moganda David		President	m			[Signature]
Mwikibi Richard		"	m		0773211437	[Signature]
Mbirye R.		member	F		0753286106	M.R.
alabicyo		member	F		0757954588	AK.
MABIRYE		member	F			M.B.

CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date: 10/9/2016

Venue: NAKATO

Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	AGE
			M	F			
KUDRAGA	Nakaato		✓		0793854459	[Signature]	62
Kitimbo Patricia	"		✓		0756580883	[Signature]	67
BANONJA CHERALD CHARLES	"		✓		0755192902	[Signature]	51
Namwase John	"			✓		MJBSCA	40
Nakayima	NAKATO			✓		NAK	48
Biraga George	Nakaato		✓		0755987045	[Signature]	66
Kimbi Goddy	NAKATO		✓		0757050273	[Signature]	64
Muteesa T.	Nakaato		✓		0757168793	[Signature]	45
MPPSA DAN.	NAKATO		✓			[Signature]	35
Subale Samuel	Nakaato		✓		0751-572542	[Signature]	48
Mutaba PRED	NAKATO		✓		0772320923 0700158847	Mutaba	52
Kagoya Rebecca	Nakaato			✓	0753947723	[Signature]	49

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area



CONSULTANCY FOR THE ASSESSMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet


Date Sept 6, 2016
 Venue KASAMBAYA

Name	Organization VILLAGE	Designation/ TITLE	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature	AGE
			M	F			
KABUYI MARK	KASAMBAYA	DMUTAKA	<input checked="" type="checkbox"/>		0783900079	Kabuyi	52
Kagame gashyamba	Kasambaya	MUTIZI	<input checked="" type="checkbox"/>		0771900402	Kagame	51
KWASWA	Kasambaya	AMUTIZI	<input checked="" type="checkbox"/>		078675103	Kwaswa	48
Mugoda Michael	Kasambaya	AMWANIKA	<input checked="" type="checkbox"/>		0774035599	Mugoda	35
MARGARET Kucheko	Kasambaya	AMANDISIWAHATA		<input checked="" type="checkbox"/>	0789460221	Margaret	40
MURUKA HAKI	Kasambaya	AMANDI WAKA		<input checked="" type="checkbox"/>	0776148454	MURUKA	36
Atim Judith	Kasambaya		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x x x - - - -	Atim	49
Kyaka	Jamba			<input checked="" type="checkbox"/>	0703201737	Kyaka	30
Rajo	Nambaza		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0773444252	Rajo	38
Kizza Joseph	Kasambaya	CI MANLI	<input checked="" type="checkbox"/>		0774639629	Kizza	42



ii) *Key Issues Raised and Discussed*

LOCATION	ISSUES RAISED & DISCUSSED	PHOTOGRAPHIC RECORD
Kitambuza	<ol style="list-style-type: none"> 1. What are the chances that everybody whose property is destroyed will be compensated given that up to now there are some people who have not yet been compensated? 2. If I lost someone now, can I still bury in my burial grounds and be eligible for compensation? 3. Economic activities within KFS 	
Kalagala	<ol style="list-style-type: none"> 1. We have a challenge that, for example, our youth have been depending on the river to earn a living. From the river they are able to catch fish and mind sand for sale. With the coming of this project, they are going to find it difficult to continue with these activities. Special attention needs to be given to these youth, for example, encouraging them engage in tree planting so they can get alternative sources of income in the future, but before that, they need to be given skills through training and sensitization. This, I hope, will be part of the support the project has for us. 2. During the implementation of the project there may be some tasks that may not require specialized skills. We request that the people affected by the project are given priority for employment at that time. 3. The government keeps on failing on its promises of conservation of the river banks. This is not the first time we have been told about the need to conserve the river banks. In the end nothing gets to be done. How much shall we be blamed for for the destruction of the environment around if for example if electricity is generated from near us Isimba and it is not extended to our community? 4. Economic activities within KFS 	
Mirembe	<ol style="list-style-type: none"> 1. Government officials come to us and they collect our views about government projects. However, when it comes to feedback from such meetings, we do not receive any. Is there any assurance that there will be feedback arising from the meeting we 	





Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

LOCATION	ISSUES RAISED & DISCUSSED	PHOTOGRAPHIC RECORD
	<p>have held today?</p> <p>2. I came a bit later but if I may ask, what is this project about?</p>	
Kirugu-Wakikoola	<p>1. What is the whole purpose of acquiring our land? Why would we not be left to continue with our lives as usual instead of asking us to give up our land?</p> <p>2. There are some rich land owners who do not stay here in the community. Instead they have given their land to care takers who are currently using these pieces of land. What happens to the care taker's property that may be affected by the project?</p>	
Kikubamutwe	<p>1. Who will be responsible for the compensation of the affected people –is it the government or the contractor?</p> <p>2. Shall we also as community members get an opportunity to be employed in this project?</p> <p>3. Why does government allow the contractors to be more in the construction/ building of some dams compared to Ugandans? At least during the construction of Bujagali dam we were happy to see that there were more Ugandans involved compared to non-Ugandans. But the Chinese at Isimba far outnumber the Ugandans by far. Who decides the number of each category?</p> <p>4. There some people in the T-line for the Rwanda line who have not yet been compensated. Now you are again coming with a new project that will require compensation. Why can't government first compensate those first before embarking on this new project?</p> <p>5. Sometimes the locals employed are underpaid by the contractor and mistreated to the extent that they are not even given safety ware especially in the Isimba Project. Why is this so? If there was a law on the minimum wage it would be followed up legally. Why can't government fix a minimum wage?</p> <p>6. Why is it that after valuation it takes long to compensate the affected people? Sometimes even the little promised is reduced?</p> <p>7. At the end of this meeting are we going to get any allowance</p> <p>8. In the previous projects around our community it is the men who are given the compensation fund. These men usually ignore their spouses and prefer to get new relationships</p>	



Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

LOCATION	ISSUES RAISED & DISCUSSED	PHOTOGRAPHIC RECORD
Nankwanga	<p>leading to women being left with children to fend for alone. What is your plan for such mishaps?</p> <ol style="list-style-type: none"> 1. Most people in this community just see power lines that pass through their compounds. One reason they cannot tap into these lines is because the rates for electricity are beyond their reach. Why can't government consider subsidizing the cost of acquiring and using this power? 2. These dams re being built and the affected people are compensated which is the right thing to do but how else do we benefit from this projects that affect us as communities? 3. During the construction of Bujagali dam people were affected differently even after compensation of the people. For example, some people's houses cracked, animals miscarried and many other things happened because of the blasting of the rocks around. Is there chance such people will also be compensated? 4. How have you planned for the locals to get employment in the project as affected people? 	
Wakisi Market	<ol style="list-style-type: none"> 1. Sometimes as projects are being planned like now government sends people like you to the community and they make us fill forms but we do not gets any feedback concerning these forms. Why does it happen this way? 2. What has government planned for those who will be affected by this project? 3. Can those not directly affected by the project benefit from the project by getting employment? 4. Economic activities within KFS extension area 	
Wakisi Central	<ol style="list-style-type: none"> 1. If one's land is affected and he is compensated, shall they be again be allowed to continue using the affected piece of land even if it means doing so with the guidance of the government authorities? 2. Sometimes government asks us what programs we as a community would like to see supported in our communities but it ends at the time the meeting is conducted. How sure can we be that this time around some support will be forthcoming? 3. There are Bazungu who have bought land along the river. After paying for it, they fence off the area right up to the river bank, denying the community access to the river. Do they have that right not to allow us 	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

LOCATION	ISSUES RAISED & DISCUSSED	PHOTOGRAPHIC RECORD
Wakikoola A	<p>access the river?</p> <ol style="list-style-type: none"> 1. You sometimes give us projects but again bring Chinese and Indians to implement. Why does government allow these people to mistreat us? 2. How is that dam at Isimba going to help us as a community? 3. For me as an a person whose property is affected, I may be compensated alright but how else will I helped to live and benefit from this project? 4. Economic activities within KFS extension area 	
Bukasa	<ol style="list-style-type: none"> 1. Sometimes the compensation is not commensurate with the loss incurred especially in regard to the land lost. How am I expected to get what I have lost if I am given what is not adequate? 2. How shall we be supported to cope with the negative impacts of flooding if we experience any which right now we cannot think of? 	
Kasambya	<ol style="list-style-type: none"> 1. Some of us have land and other property close to the river. Much as we have not been identified as affected right now, we feel we may eventually be affected. That is why we request that the survey process be revisited to properly ascertain that really we shall not be affected 	
Namiyagi	<ol style="list-style-type: none"> 2. The NEMA people came and demarcated out the boundary that is affected sometime back. Most of us the community members were not satisfied with boundary because we felt that they marked out a distance of more than the 100m. The public outcry was not only limited to our community but beyond. Will this process be repeated so we can also be sure that it is only 100m and not more? 	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

LOCATION	ISSUES RAISED & DISCUSSED	PHOTOGRAPHIC RECORD
Nabukosi Central	<p>3. What else does government promise to us as means of supporting those that will be affected by this project?</p>	
Busowoko-Bweigamye	<p>1. In this meeting I can see even those who are not affected. Why have they also been invited?</p> <p>2. You have asked us a number of questions; including one that how many (as a proportion) households have radios. Does a higher number in radio ownership help us or not?</p> <p>5. Economic activities within KFS</p>	
Busowoko Central	<p>3. Where shall we be able to take our complaints, if any, if we are aggrieved?</p> <p>4. Now long will it take for the affected people to receive their compensation?</p>	

Appendix 17: Tree Species of the KFS Extension Area (Survey September 2016)

Tree Species	Family	IUCN Redlist
<i>Acacia species</i>	Leguminosae	NL
<i>Albizia coriaria</i>	Leguminaceae	NA
<i>Albizia zygia</i>	Leguminaceae	NA
<i>Antiaris toxicaria</i>	Moraceae	NA
<i>Annona senegalensis</i>	Annonaceae	NA
<i>Blighia species</i>	Sapindaceae	NL
<i>Atocarpus heterophylla</i>	Moraceae	NL
<i>Bridelia Micrantha</i>	Euphobiaceae	NA
<i>Cassia mannii</i>	Leguminaceae	NA
<i>Celtis durandai</i>	Ulmaceae	NL
<i>Coffea spp</i>	Rubiaceae	NL
<i>Combretum molle</i>	combretaceae	NA
<i>Cordia Africana</i>	Boraginaceae	NA
<i>Cupressus lustanica</i>	cupressaceae	NL
<i>Dombeya bagshawei</i>	Sterculiaceae	NA
<i>Erythrina abyssinica</i>	Leguminaceae	NL
<i>Eucalyptus grandis</i>	myrtaceae	NA
<i>Ficus spp</i>	Moraceae	NL
<i>Grewia mollis</i>	Tiliaceae	NA
<i>Maesopsis eminii</i>	Rhamnaceae	NA
<i>Mangifera indica</i>	Gutiferae	DD
<i>Markhamia lutea</i>	Sapotacea	NA
<i>Milicia excelsa</i>	Moraceae	LR/NT
<i>Milicia excelsa</i>	Cupressaceae	LC
<i>Rhus natelensis</i>	Ananadiaceae	NL
<i>Sapium ellipticum</i>	Euphobiaceae	NL
<i>Senna spectebilis</i>	Leguminaceae	NL
<i>Spathodia campanulata</i>	Bignonaceae	NL
<i>Tectona grandis</i>	Rutaceae	NA
<i>Terminalia superba</i>	Compretaceae	NA

Filed Survey 2016, September

Note: NYA = Not Yet Assessed, NL = Not Listed in category of life, DD= Data Deficient for assessment, LC= Least Concerned, LR/NT = Low Risk Near Threatened
Survey Location Map as per Appendix 8

Appendix 18: Bird Diversity - KFS Extension Area (Survey September 2016)

ATLAS NO	SPECIES NAME	Habitat & IUCN status Spp Code	Sites Surveyed		
			Kibibi	Buyala	Bukasa
6	LONG-TAILED CORMORANT <i>Phalacrocorax africanus</i> 17	W	12	2	0
17	CATTLE EGRET <i>Bubulcus ibis</i> 32	G	1	3	0
21	LITTLE EGRET <i>Egretta garzetta</i> 36	W	6	5	0
25	GREY HERON <i>Ardea cinerea</i> 25	R-NT,W	1	0	0
30	AFRICAN OPEN-BILLED STORK <i>Anastomus lamelligerus</i> 43	A,w,G	2	1	3
39	HADADA IBIS <i>Bostrychia hagedash</i> 51	w	3	2	2
76	AFRICAN FISH EAGLE <i>Haliaeetus vocifer</i> 137	W	0	1	0
109	LIZARD BUZZARD <i>Kaupifalco monogrammicus</i> 129	f	3	4	0
122	LONG-CRESTED EAGLE <i>Lophaetus occipitalis</i> 130	f	0	0	5
142	HELMETED GUINEAFOWL <i>Numida meleagris</i> 190	G	5	6	0
178	BLACK CRAKE <i>Amaurornis flavirostris</i> 201	W	0	5	0
270	TAMBOURINE DOVE <i>Turtur tympanistria</i> 357	F	5	0	5
271	BLUE-SPOTTED WOOD DOVE <i>Turtur afer</i> 355	f	3	6	0
283	RED-EYED DOVE <i>Streptopelia semitorquata</i> 350	f	6	0	6
289	LAUGHING DOVE <i>Streptopelia senegalensis</i> 351		4	6	0
302	ROSS'S TURACO <i>Musophaga rossae</i> 377	F	4	0	5
305	EASTERN GREY PLANTAIN EATER <i>Crinifer zonurus</i> 376		5	0	6
320	DIDRIC CUCKOO <i>Chrysococcyx caprius</i> 388		0	3	0
323	WHITE-BROWED COUCAL <i>Centropus superciliosus</i> 406		5	5	6
358	AFRICAN PALM SWIFT <i>Cypsiurus parvus</i> 452	Ae	3	0	0
369	SPECKLED MOUSEBIRD <i>Colius striatus</i> 459		0	0	6

ATLAS NO	SPECIES NAME	Habitat & IUCN status Spp Code	Sites Surveyed		
			Kibibi	Buyala	Bukasa
375	WOODLAND KINGFISHER <i>Halcyon senegalensis</i> 475	A	5	6	5
383	PIED KINGFISHER <i>Ceryle rudis</i> 465	W	0	5	0
390	WHITE-THROATED BEE-EATER <i>Merops albicollis</i> 479	A,f,Ae	6	0	5
401	BROAD-BILLED ROLLER <i>Eurystomus glaucurus</i> 500	A,f,w	6	0	5
420	AFRICAN GREY HORNBILL <i>Tockus nasutus</i> 524		0	0	2
426	SPECKLED TINKERBIRD <i>Pogoniulus scolopaceus</i> 553	F	0	0	5
430	YELLOW-THROATED TINKERBIRD <i>Pogoniulus subsulphureus</i> 555	FF	0	0	4
512	ANGOLA SWALLOW <i>Hirundo angolensis</i> 627	w,Ae	0	6	0
538	LITTLE GREENBUL <i>Andropadus virens</i> 705	F	4	0	0
562	COMMON BULBUL <i>Pycnonotus barbatus</i> 732	f	5	3	6
576	WHITE-BROWED ROBIN-CHAT <i>Cossypha heuglini</i> 751	f	0	6	6
588	BROWN-BACKED SCRUB-ROBIN <i>Cercotrichas hartlaubi</i> 743	f	0	2	0
612	AFRICAN THRUSH <i>Turdus pelios</i> 801	f	0	2	5
621	AFRICAN MOUSTACHED WARBLER <i>Melocichla mentalis</i> 915		0	6	0
637	ICTERINE WARBLER <i>Hippolais icterina</i> 885	P	6	0	0
641	TRILLING CISTICOLA <i>Cisticola woosnami</i> 873		0	1	4
647	WINDING CISTICOLA <i>Cisticola galactotes</i> 860	w	0	0	5
658	TAWNY-FLANKED PRINIA <i>Prinia subflava</i> 913	f,w	0	6	5
743	CHESTNUT WATTLE-EYE <i>Dyphorophya castanea</i> 958	FF	5	0	0
781	GREEN-HEADED SUNBIRD <i>Cyanomitra verticalis</i> 1130	F	0	0	4
787	SCARLET-CHESTED SUNBIRD <i>Chalcomitra senegalensis</i> 1122	f	6	1	0
803	RED-CHESTED SUNBIRD <i>Cinnyris</i>	R-	3	0	0

ATLAS NO	SPECIES NAME	Habitat & IUCN status Spp Code	Sites Surveyed		
			Kibibi	Buyala	Bukasa
	<i>erythrocerca</i> 1098	RR,W			
811	YELLOW WHITE-EYE <i>Zosterops senegalensis</i> 1133	f	6	0	0
815	GREY-BACKED FISCAL <i>Lanius excubitoroides</i> 1032	A,f,w	0	0	4
836	NORTHERN PUFFBACK <i>Dryoscopus gambensis</i> 1000	F	0	0	3
843	BLACK-HEADED GONOLEK <i>Laniarius erythrogaster</i> 1003	f	3	6	6
841	TROPICAL BOUBOU <i>Laniarius aethiopicus</i> 1004	f	4	6	0
871	SPLENDID STARLING <i>Lamprotornis splendidus</i> 1061		6	0	6
872	RUPPELL'S LONG-TAILED STARLING <i>Lamprotornis purpuroptera</i> 1060	F	5	2	25
876	VIOLET-BACKED STARLING <i>Cinnyricinclus leucogaster</i> 1048	R-NT,FF	0	0	1
881	GREY-HEADED SPARROW <i>Passer griseus</i> 1206	R-RR	6	0	2
908	BLACK-HEADED WEAVER <i>Ploceus cucullatus</i> 1165	f	0	0	30
959	RED-BILLED FIREFINCH <i>Lagonosticta senegala</i> 1241	R-NT,f	2	3	0
974	RED-CHEEKED CORDON-BLEU <i>Uraeginthus bengalus</i> 1261		2	3	0
980	BRONZE MANNIKIN <i>Lonchura cucullata</i> 1266	G	20	7	0
985	PIN-TAILED WHYDAH <i>Vidua macroura</i> 1216		0	6	0

Note: Data Source , Consultant's Survey 2016, Survey Location Map as per Appendix 9

Threat categories		Habitat Codes	
G-CR	globally critical	A	Afrotropical migrant – a species migrating within Africa
G-EN	globally endangered	P	Palaearctic migrant - species which breed in Europe or Asia
G-VU	globally vulnerable	p-	Species with at least some palaearctic populations
G-LR/nt	globally lower-risk, near threatened	FF	Forest specialist – species typical of forest interiors
G-DD	globally data deficient	G	Grassland species
G-RR	globally range-restricted	F	Forest generalist – less specialized, also occur in small patches of forest
R-CR	regionally critical	f-	Forest visitor
R-EN	regionally endangered	W	Water bird, specialist – normally restricted to wetlands or open waters
R-VU	regionally vulnerable		
R-NT	regionally near-threatened		
R-RR	species of regional responsibility		

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

	<i>w- Water bird, no-specialist – often found near water</i>
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Appendix 19: Butter Fly Species - KFS Extension Area (Survey September 2016)

Species	Ecotype
<i>Acraea alicia</i>	W
<i>Acraea encedon</i>	W
<i>Ariadne enotrea</i>	F
<i>Belenois creona</i>	M
<i>Belenois thysa</i>	f.
<i>Charaxes tiridates</i>	F
<i>Charaxes varanes</i>	W
<i>Colotis evippe</i>	W
<i>Dixeia pigea</i>	W
<i>Eicochrysops hippocrates</i>	W
<i>Eretis lugens</i>	W
<i>Eronia cleodora</i>	O
<i>Eurema hecabe</i>	M
<i>Hypolimnna misippus</i>	M
<i>Hypolimnna salmacis</i>	F
<i>Junonia chorimene</i>	O
<i>Leptosia nupta</i>	F
<i>Leptosia wigginsii</i>	F
<i>Nepheronia argia</i>	F
<i>Nepheronia thalassina</i>	f.
<i>Neptis saclava</i>	W
<i>Papilio dardanus</i>	W
<i>Papilio demodocus</i>	M
<i>Pardaleodes incerta</i>	F
<i>Zizeeria knysna</i>	W
<i>Zizula hylax</i>	W
Total=26	

Note: Data Source , Consultant's Survey 2016 September , Suvey Location map as per Appendix 10

Forest dependent species (F), Forest edge/woodland species (f), Open habitat species (O), Widespread species (W), Migratory species (M), and Wetland species (S).

Appendix 20: KFS Extension Area Land Operators and the Cadastral Maps.
A. List of KFS Extension Area Land Operators

S.N	DISTRICT: KAYUNGA	COUNTY: NTENJERU	SUB-COUNTY: KANGULUMIRA
	PARISH: KANGULUMIRA	BUKASA VILLAGE	
1	UNKNOWN		
2	JOHN DISYE		
3	ZVELIO NALUMENYA		
4	WANASOLO JOHN		
5	KADU DAVID		
6	HAJI BASHIR		
7	KERESENYE AJAMBO		
8	MUKASA FRANK		
9	FALASCO MIGABO		
10	MUTIABA GODFRY		
11	PHIONA RICHARDS		
12	BATURMAYO BALIGENDA		
13	NASONI WILLIAM		
14	MAYENDE JOHN		
15	MUHAMMUD SUNNY FARMS		
16	BYANSI MOSES		
17	BOGERE RONALD		
18	BABIRYE BETTY		
19	MAGONA		
S.N	DISTRICT: KAYUNGA	COUNTY: NTENJERU	SUB-COUNTY: KAGULUMIRA
	PARISH: SEETA NYIZZE	NAMAKWANDA VILLAGE	
1	NTALO WEBSTER		
2	FATHER		
3	SARANAC		
4	ALEX		
5	UNKOWN		
6	KAJURA ISIMAH		
7	UNKOWN		
8	UNKOWN		
9	KOOPA FRANCIS		
10	ABDUL MAFABI		
S.N	DISTRICT: KAYUNGA	COUNTY: NTENJERU	SUB-COUNTY: KANGULUMIRA
	PARISH: KAWOMYA	MIREMBE VILLAGE	
1	WANZALA TWAHA		
2	KYAMBADDE		
3	DR RICHARD		
4	MAGEZI		
5	MUGULUSI		
6	MIRINDA		
7	CHRIS		
8	CHARLES		

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9	JIMMY		
10	EMRE		
11	VICTORIA		
12	PAULO		
13	WANDERA ABBAS		
14	WASWA DDUMBA		
	BUIKWE DISTRICT	COUNTY : BUIKWE	SUB-COUNTY: NAKALANGA
S.N	PARISH: WAKISI	NAMIYAGI VILLAGE	
1	IBRA		
2	LWABI ANDRE		
3	NIZA HAMULANIN		
4	RAINER HOLST		
5	UNKNOWN		
6	KINTU ROBERT		
7	HERBERT		
8	KYABAZUMA JENIFER		
9	NAKU ALI		
10	BUYINZA		
11	MUSITAFU		
12	OJUMA		
13	KAMU		
14	LANDI		
15	DR. ADEBAYI		
16	DR. DAVID		
17	NIZA HAMULANIN		
18	RICHARD VAN		
19	NIZA HAMULANIN		
20	RICHARD VAN		
21	NIZA HAMULANIN		
S.N	BUIKWE DISTRICT	COUNTY : BUIKWE	SUB -COUNTY: WAKISI
	PARISH: NAKALANGA	BUDODA VILLAGE	
1	NYANZI EVEREST		
2	AMIN NOYMAN		
3	BRIAN AND IRIS		
4	ADUSO BARBRA		
5	MORO GEORGE AND KYAMAZIMA JOSEPHINE		
S.N	BUIKWE DISTRICT	COUNTY : BUIKWE	SUB-COUNTY: WAKISI
	PARISH: WAKISI	WAKIKOOLA "A" VILLAGE	
1	SWALLEH		
2	TEBAJANGA BAVID		
3	LUCA DALLOGLIO AND BIRUNGI ANNAH		
4	KIGERE MOHAMMED		
5	SERUTEGA FAMILY		

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6	MUCHANGI FAMILY		
7	ODOI JOSEPH		
8	MWASE		
9	SUNDAY RONALD		
10	BOGERE LUTAYA		
11	DIRISA KIRYA		
12	MARK		
13	BATULI PETER		
14	UNKNOWN		
15	JUNIOR BACHU		
S.N	BUIKWE DISTRICT	COUNTY : BUIKWE	SUB-COUNTY:WAKISI
	PARISH: WAKISI	WAKISI MARKET VILLAGE	
1	PASTOR SSERUGO		
2	FISH MONGERS		
3	MUSUNGU		
4	MRS. MUKAYA		
5	VAIMAN KALIKWAN		
6	SEDRICK		
7	HAJJI SEMWEMBA		
S.N	BUIKWE DISTRICT	COUNTY : BUIKWE	SUB-COUNTY:WAKISI
	PARISH: WAKISI	WAKISI CENTRAL VILLAGE	
1	WILLIAM JOOSEBOR		
2	WEKESA AMOS		
3	MUGENI SEPHERIA		
4	MASIGA GODFRY		
5	JACKSON WAFULA		
6	CHRIS HIGGSON		
7	BWIRE STEPHEN		
S.N	BUIKWE DISTRICT	COUNTY : BUIKWE	SUB-COUNTY:WAKISI
	PARISH: WAKISI	NAKWANGA VILLAGE	
1	BECAH MAGUMBA		
2	KISIGE JIMMY		
3	BECAH MAGUMBA		
4	DEVEN SOMAIA		
5	DR JUKO		
6	WAMUSHA MUTWALIBA BUCHE		
7	PACIS		
8	DR JUKO		
9	PACIS		
10	UNKNOWN		
11	JESCA		

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

12	MRS KYAKUWA WANYAMA		
13	NOBERT		
14	JESCA		
15	KYANGWA ANDREW		
16	JESCA		
17	EGESA PETER		
18	PATRICK		
19	MEGA		
20	IBRAHIM KAYE		
21	UNKNOWN		
22	DAVID WANGUTUSI		
23	MUHAMMUD MWAMDANI		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUTAGAYA
	PARISH: NAWAPANDA	BUBUGO BUDONDO VILLAGE	
1	WAKABI PETER		
2	JENNY AND CHARLIE		
3	UNKNOWN		
4	UNKNOWN		
5	BULINKABA SAAHAD		
6	WAIGONDA SAAHAD		
7	UNKNOWN		
8	MUGWERI		
9	MUWONGE		
10	WABUSIGA MULAN		
11	UNKNOWN		
12	UNKNOWN		
13	KASUMBA DAVID		
14	UNKNOWN		
15	UNKNOWN		
16	MUWOGO		
17	WAIBI SULAIMAN		
18	PAULO BALIEYO		
19	WAIBI SULAIMAN		
	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUTAGAYA
	PARISH: NAWAPANDA	NABUKOSI CENTRAL VILLAGE	
1	NATHAN JORE		
2	MARIUS VAN ROOYEN		
3	NTALO WEBSITE		
4	ANKOLA PROJECT		
5	MUVAWALA BETTY		
6	KITIMBO NATHAN		
7	KYEMBA POSIYIAN		
8	MUVAWLA BETTY		

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

9	KATEGE		
10	KYEMBA POSIYAN		
11	KATEGE		
12	PATU MUNABA		
13	ADULAM MUKAMA		
14	KALUDHI CHARLES		
15	BAKOMA ANTHONY		
16	BWIISO WILLSON		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUTAGAYA
	PARISH: NAWAPANDA	NABUKOSI "A" VILLAGE	
1	HOLE RINSE		
2	JAYSON		
3	KABI POSIYANO		
4	BAKOMA RONALD		
5	MOKODA LOVISA		
6	WAISWA JOHN		
7	KASONE MOSES		
8	KAKAIRE FRED		
9	BWAIYERA ANDREW		
10	KABI GEORGE		
11	UNKNOWN		
12	SEGENI		
13	MUZEE SABATH		
14	SEGENI		
15	ASHELY AND UMARU		
16	IVAIBI YOSIA		
17	BRITINY		
18	MAYANJA OPOLOT		
19	UNKNOWN		
20	BAGENDA MOSES		
21	MUTENGU FAITH		
22	KIFUSE JOHN		
23	OKOMBOLI INGESE		
24	JOWADO SSEBI		
25	KAIMU SSEBI		
26	BUYINZA HANIBARY		
27	HABIB		
28	BAGENDA LAWRENCE		
29	WEBSITE		
30	BAGENDA MOSES		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUTAGAYA
	PARISH: NAWAPANDA	BUSOWOKO BUWEIGAMIE	

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

		VILLAGE	
1	MULUNDESAM		
2	LUCY MAKOSI		
3	IMBUZI LIVING		
4	FRED KWINA KAN		
5	GIDIGO GUMIKIRIZA		
6	IRENE DABAGI		
7	BADHAGA MOSES		
8	ADAM		
9	HASSAN		
10	NNALONGO HAJAT		
11	COLLINS GIDIGO		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUTAGAYA
	PARISH: NAWAPANDA	BUKOSSE VILLAGE	
1	MUTEBI GEORGE		
2	TUMUSIIME		
3	KIIKA WILBERFORCE		
4	MUTASA STEVEN		
5	TALIYOYO MOSES		
6	BATANTE HENRY		
7	TALIYOYO MOSES		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB- COUNTY: BUTAGAYA
	PARISH: NAWAPANDA	BUSOWOKO B VILLAGE	
1	FOREST RESERVE		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUDONDO
	PARISH: KIBIBI	BUKOSSE VILLAGE	
1	DISON ODERO		
2	MUYITA JUMA		
3	THOMAS		
4	ROGGERS ALLAN		
5	UNKNOWN		
6	LAZIMA ABDUL		
7	DANIEL		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUDONDO
	PARISH: KIBIBI	BWASSE VILLAGE	
1	ERES COOPER		
2	KIDANGA FALLAGI		
3	KIDANGA KARIM		
4	BANDA SWAMIT		
5	LATE LUBALE STEPHEN C/O SHARON LUBALE		
6	JUNI SARAH		
7	BAJAINDA SAMUEL		
8	NKULEGA JACOB		

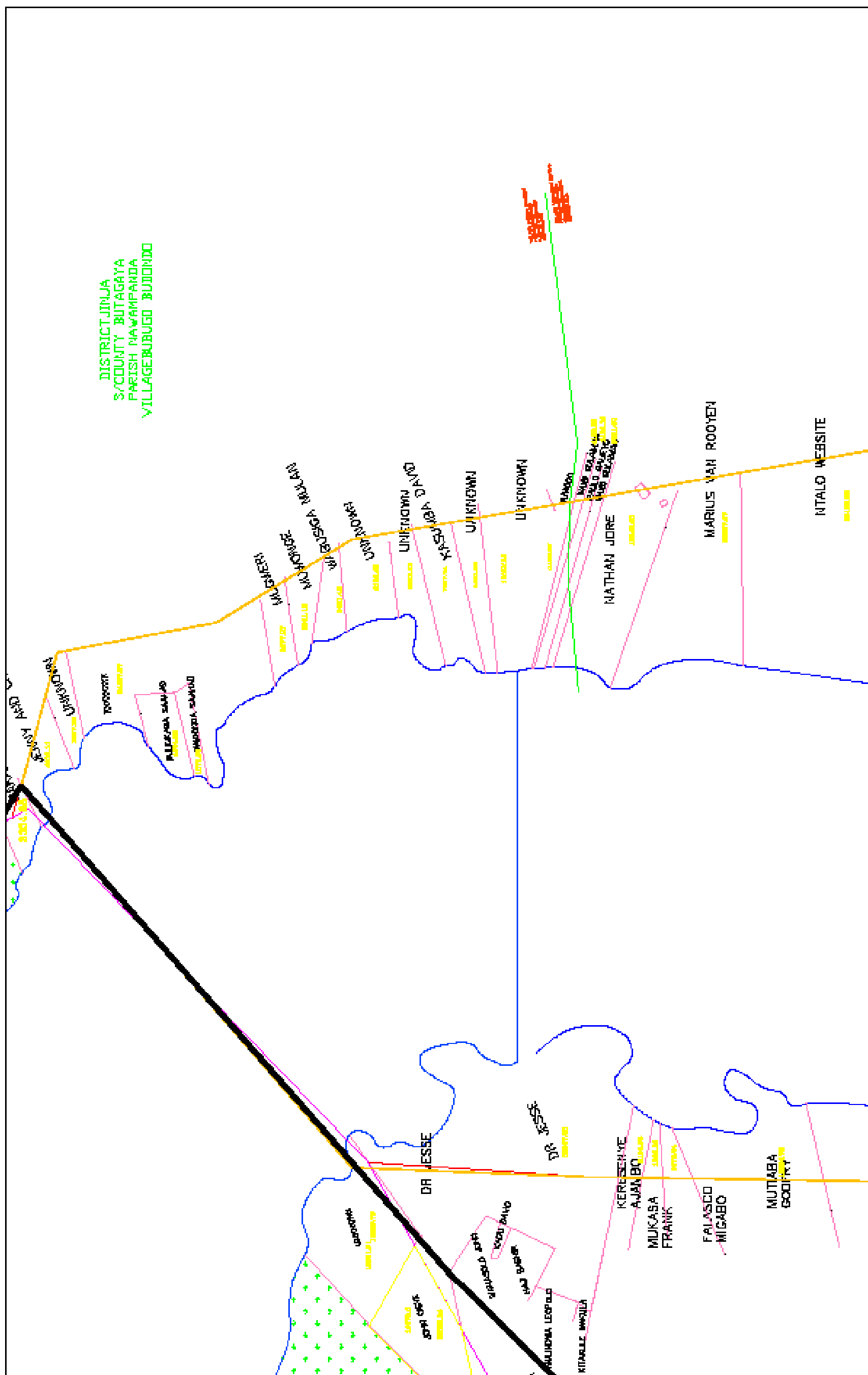
Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

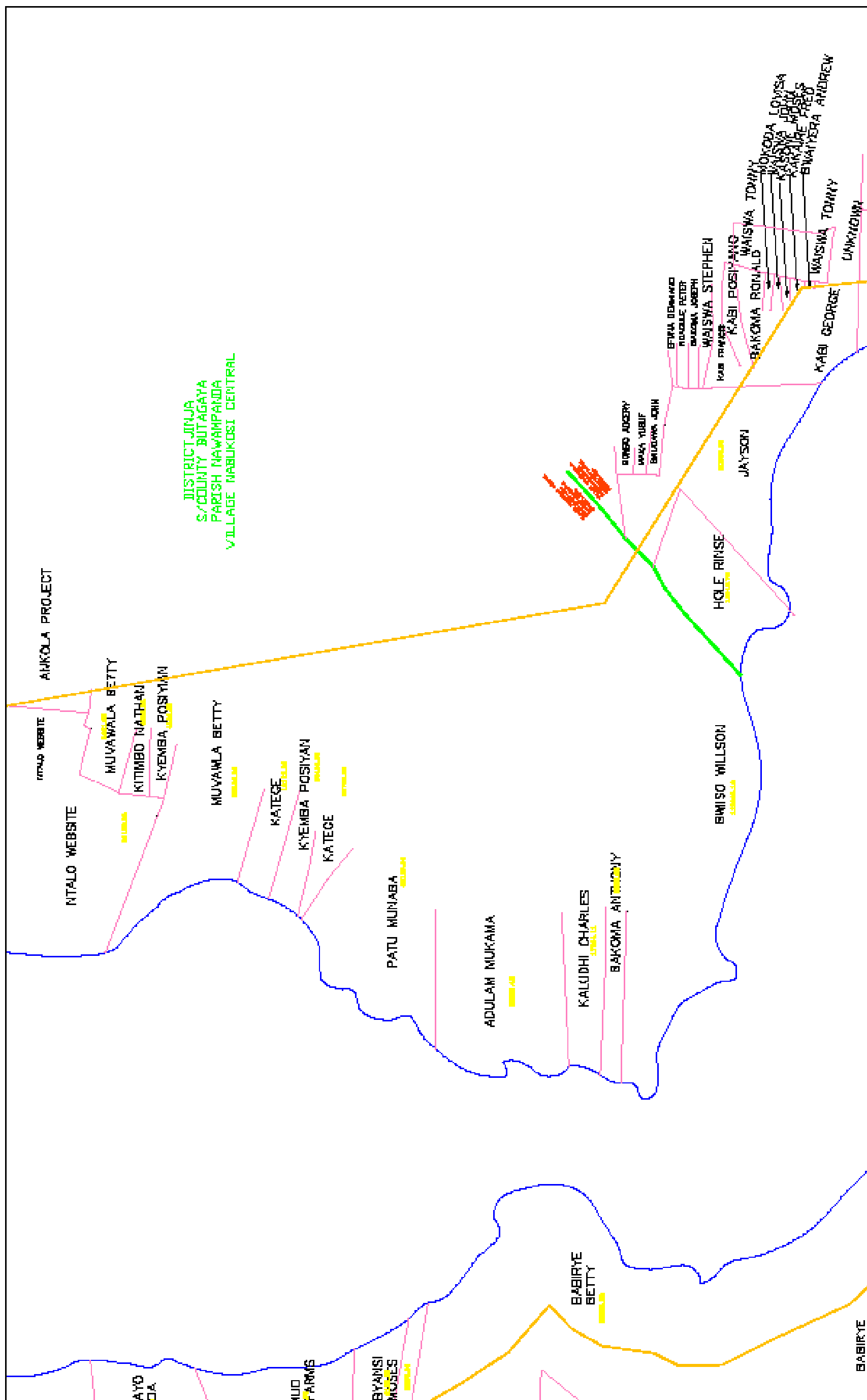
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13	UNKNOWN		
14	UNKNOWN		
15	OPIO ROBSON		
16	UNKNOWN		
17	UNKNOWN		
18	AHAMADA SAJABI		
19	UNKNOWN		
20	UNKNOWN		
21	UNKNOWN		
22	MRS MISITWA NABIRYE		
23	ADONGO MARGRET		
24	ERESE JOHN		
25	KISIGE STEPHEN		
26	ALFA TRUST		
27	VIVIAN KAGINO		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUDONDO
	PARISH: NAMIZI		
1	EVELYNE ADROMA		
2	RUZIRA ANN FLORENCE		
3	DR ELIZABETH MADURA		
4	BUYINZA ADAM		
5	BATUMBUZA FRED		
6	DR DAVID LUBEGA		
7	NANAMBI		
8	PETER ISABIRIYE		
9	ENGINEER INGEYE		
10	REV. FR. PETER PECAVET		
11	TIJJE		
12	LENN BOSCH		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUDONDO
	PARISH: NAMIZI	BUYALA "A" VILLAGE	
1	KYENKYA MARGRET		
2	KAGOYA EDITH		
3	WANABATI ROGGERS AND NAKOBI JACKSON		
4	OKWARE ROGGERS		
5	OKIRU FRANCIS		
6	TENYWA SULAIMAN		
7	RICHERD BROWNING		
8	KIWALA MEBLE		
9	SEAN		

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

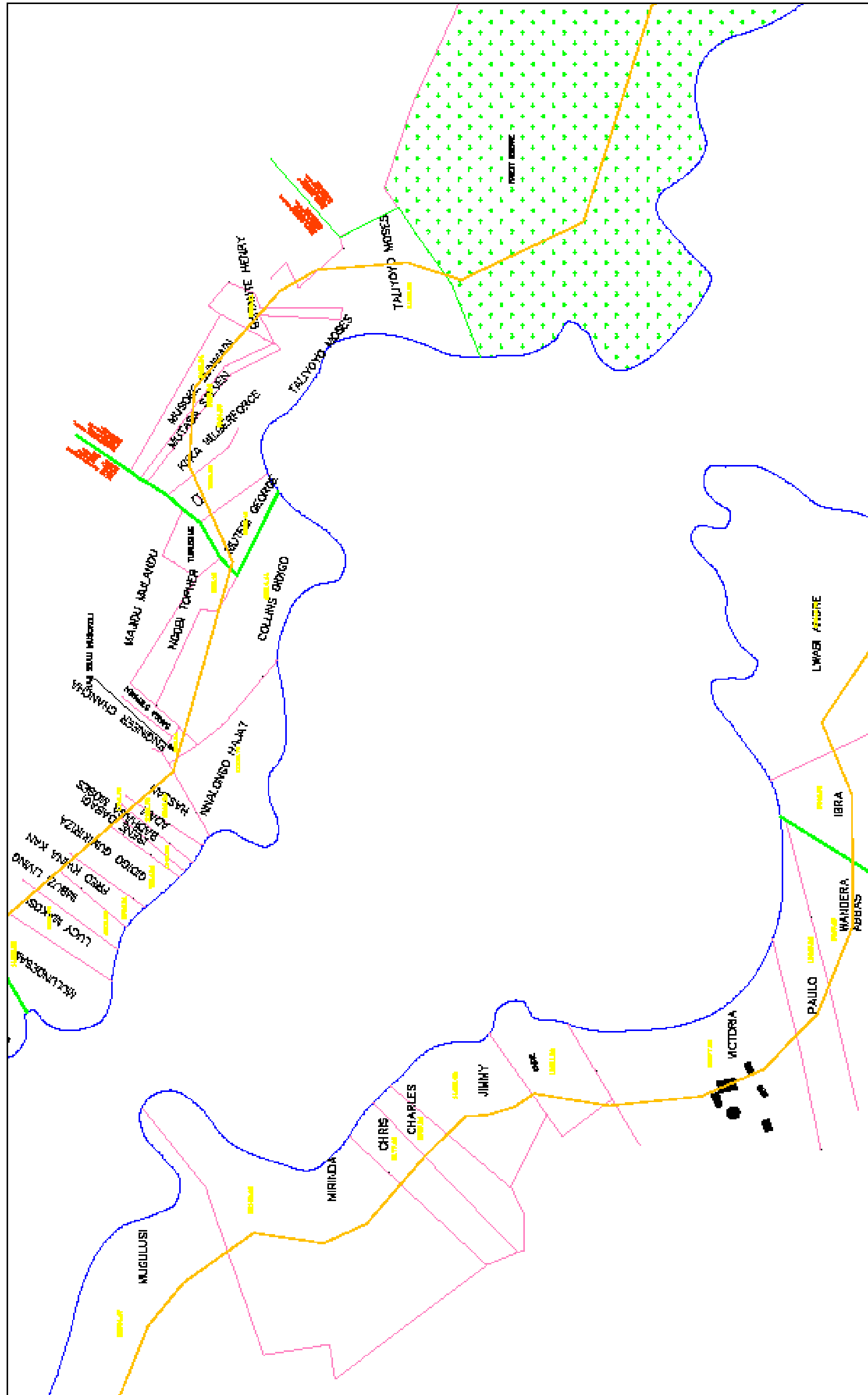
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11	BALABA		
12	JOHN BERRY		
13	WADERO TWAIBU		
14	TRACY		
15	UNKNOWN		
16	PATEL		
17	MUHOZI ROBERT		
18	MUGULUSI DAN		
19	KASULE ROBERT		
20	SHELLY		
21	JAMES MACKLIVE		
22	TIBITA WIILAIM		
23	OTUKEI PAULO		
24	OMONGOLE EDDY		
25	OTIMONG JAMADA		
S.N	DISTRICT: JINJA	COUNTY : KAGOMA	SUB-COUNTY: BUDONDO
	PARISH: NAMIZI	NAMIZI WEST VILLAGE	
1	BABIRYE ROSE AND TABU		
2	OCENY ABDUL SALAAM		
3	LATUTE MPOKIBONA		
4	OCENY ABDUL SALAAM		
5	BUJAGALI LAND		
6	TENYWA SULAIMAN		

B. Cadastral Maps KFS Extension Area Sheet 1

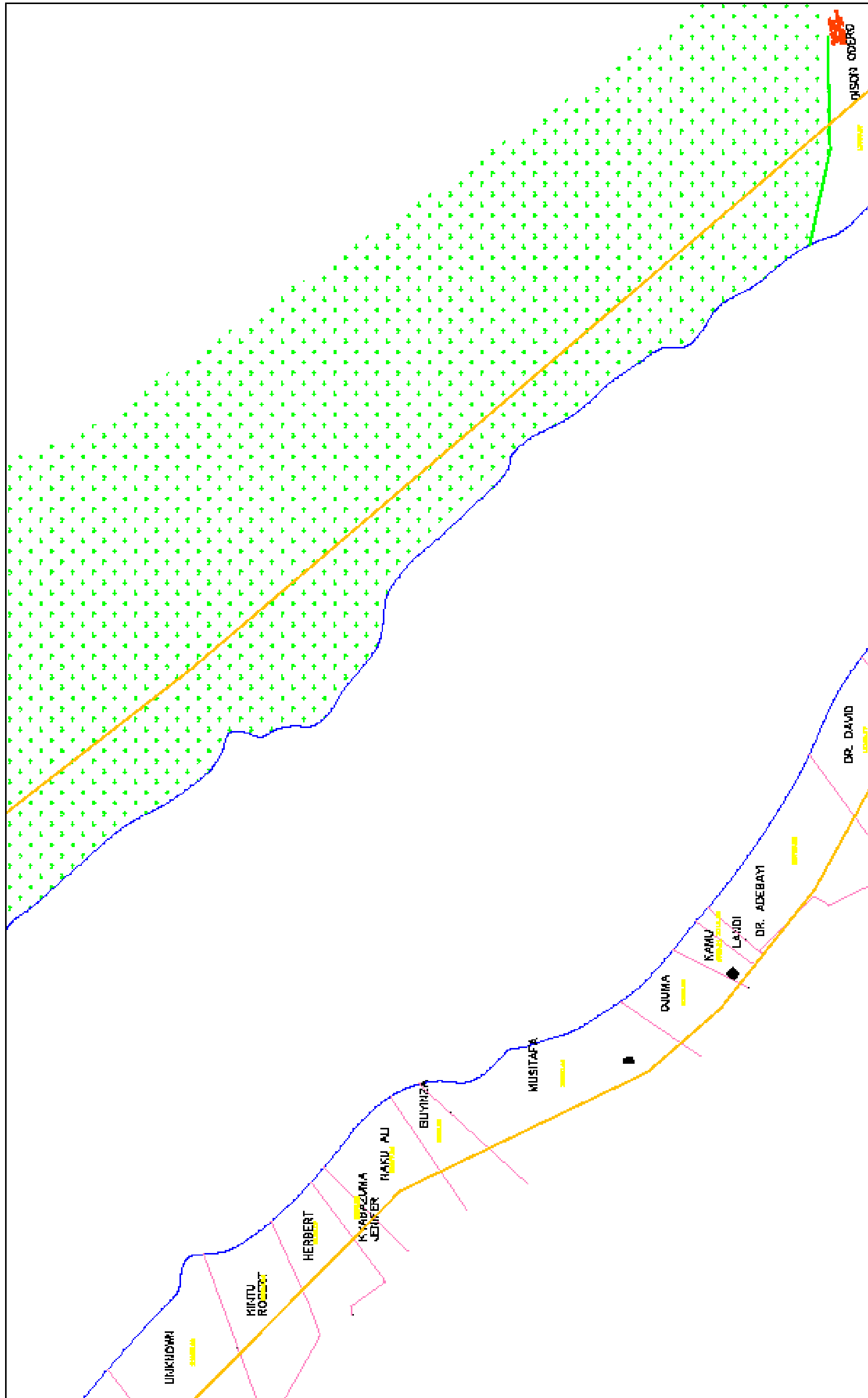


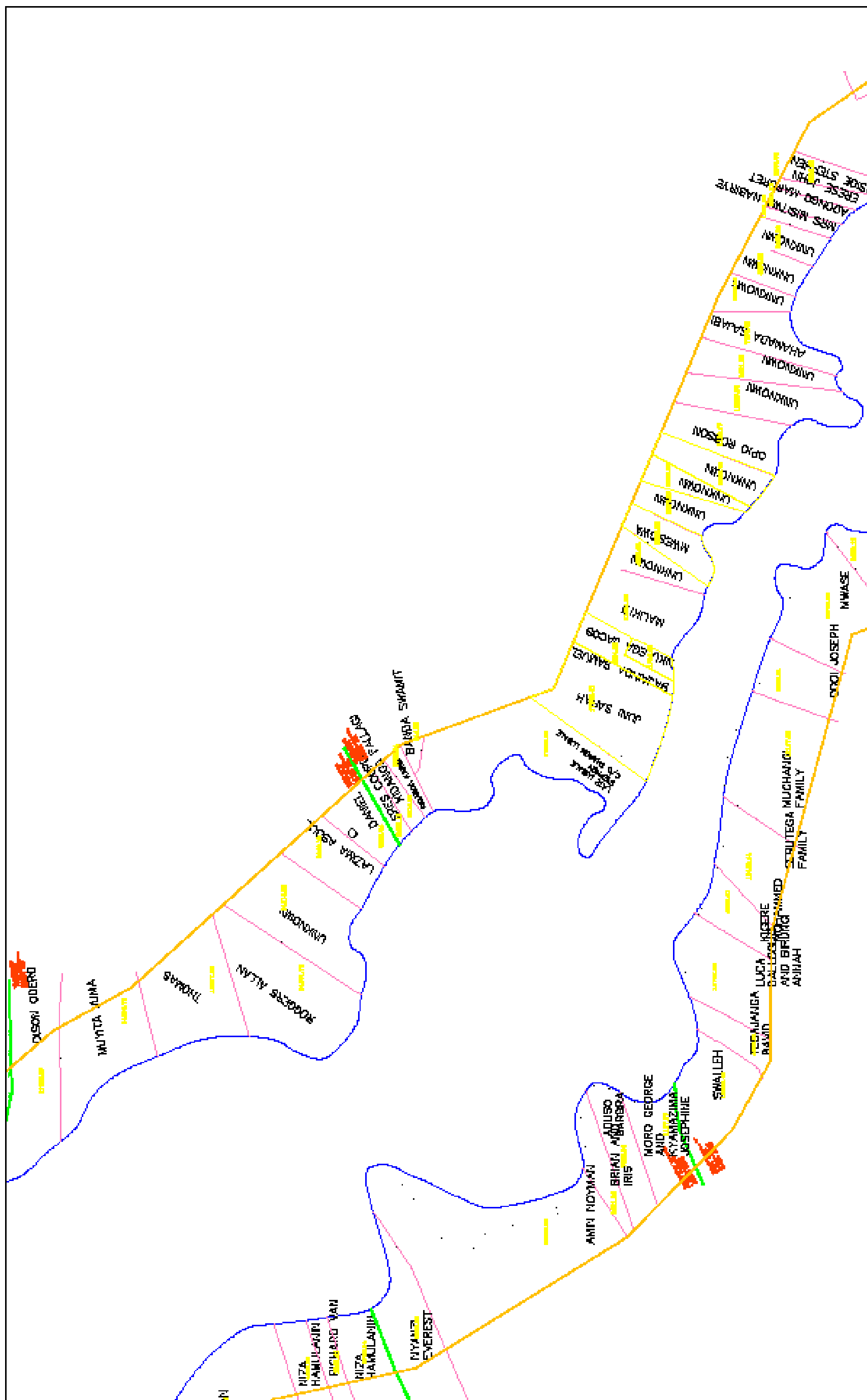


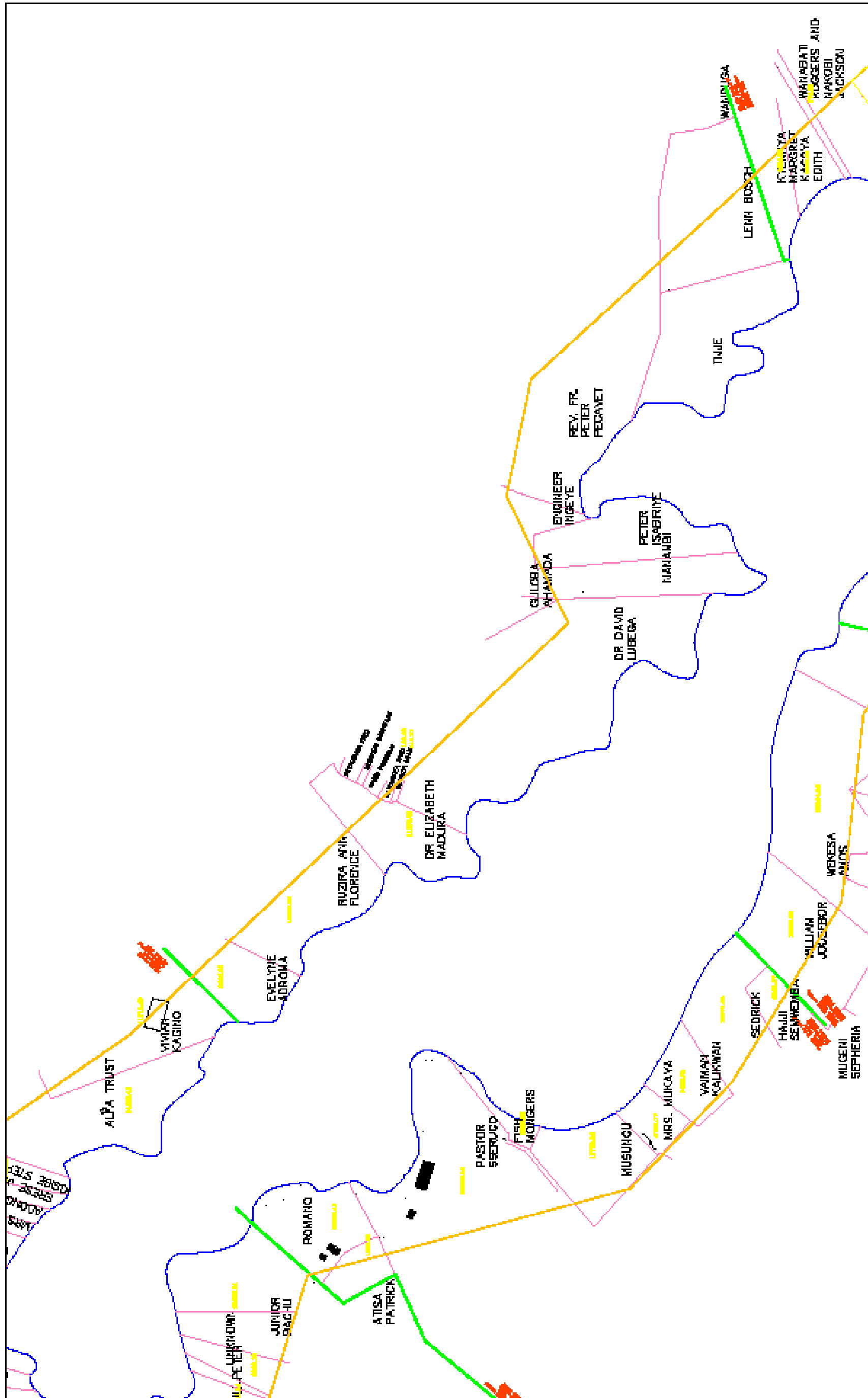


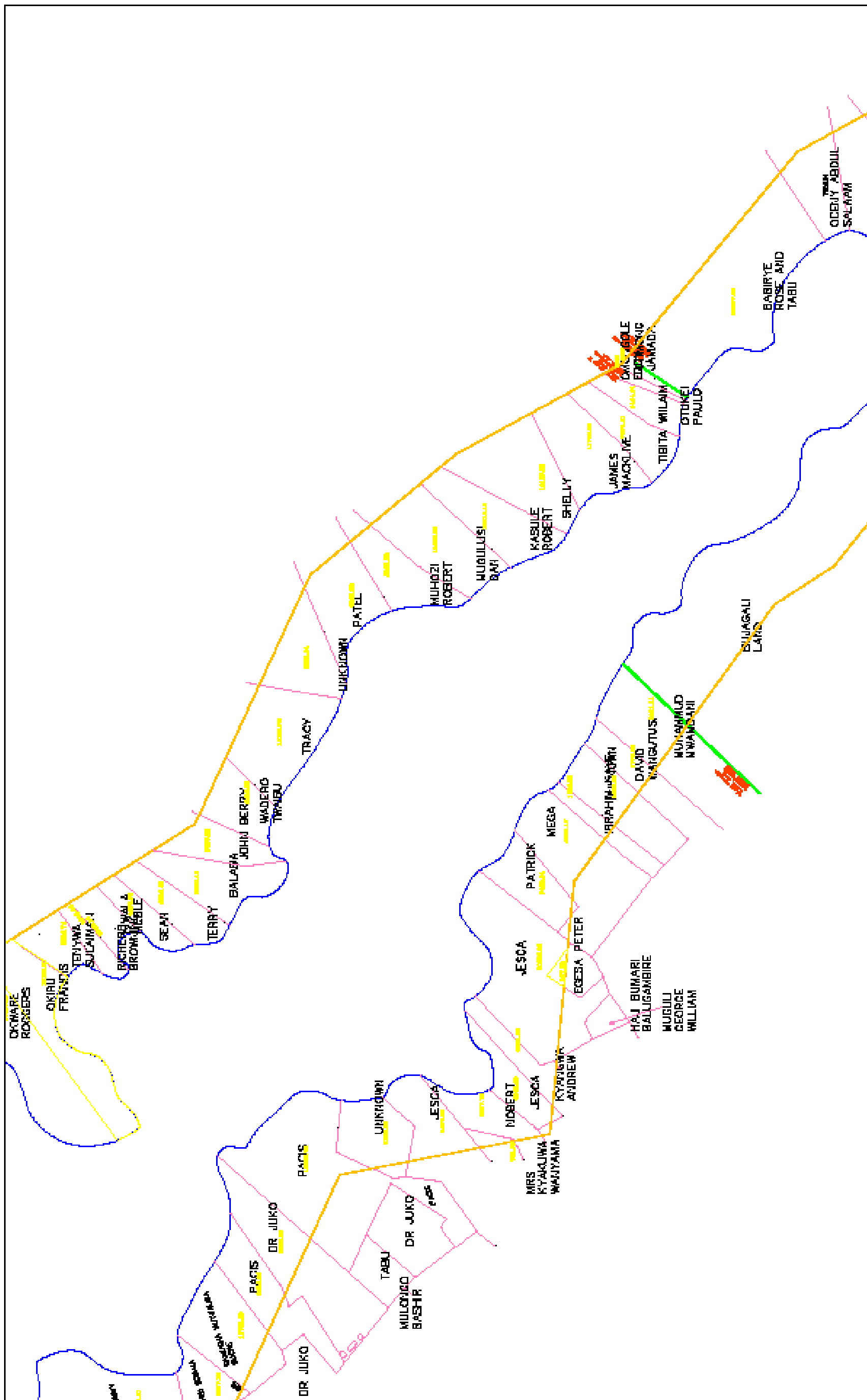


Sheet 6









Appendix: 21
Attachment 1: Alternative 1 cost Benefit Analysis

Year	Cost								Benefits			Net benefits (L=K-H)
	Hydropower plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
1	132.525	0	0	0	21.74	0.59	4.4	159			0	-159.3
2	132.525	0	0	0	0	0.59	4.9	138			0	-138.0
3	132.525	7.6	0	0	0	0.59	5.4	146			0	-146.1
4	132.525	7.6	0	0	0	0.59	5.9	147			0	-147
5	0	0	5.3	0.152	0	0.59	6.5	12.6	114.8	21.57	136.3	123.7
6	0	0	5.3	0.152	0	0.59	7.2	13.3	115.9	21.57	137.5	124.2
7	0	0	5.3	0.152	0	0.59	7.9	13.9	117.1	21.57	138.6	124.6
8	0	0	5.3	0.152	0	0.59	8.7	14.7	118.2	21.57	139.8	125.0
9	0	0	5.3	0.152	0	0.59	9.6	15.6	119.4	21.57	141.0	125.3
10	0	0	5.3	0.152	0	0.59	10.5	16.6	120.6	21.57	142.2	125.6
11	0	0	5.3	0.152	0	0.59	11.3	17.3	121.8	21.57	143.4	126.0
12	0	0	5.3	0.152	0	0.59	12.1	18.1	123.0	21.57	144.6	126.5
13	0	0	5.3	0.152	0	0.59	12.9	19.0	124.3	21.57	145.8	126.8
14	0	0	5.3	0.152	0	0.59	13.8	19.9	125.5	21.57	147.1	127.2
15	0	0	5.3	0.152	0	0.59	14.8	20.8	126.8	21.57	148.3	127.5
16	0	0	5.3	0.152	0	0.59	15.8	21.9	128.0	21.57	149.6	127.7
17	0	0	5.3	0.152	0	0.59	16.9	23.0	129.3	21.57	150.9	127.9
18	0	0	5.3	0.152	0	0.59	18.1	24.20	130.6	21.57	152.2	128.0
19	0	0	5.3	0.152	0	0.59	19.4	25.48	131.9	21.57	153.5	128.0
20	0	0	5.3	0.152	0	0.59	20.7	26.84	133.2	21.57	154.8	128.0
21	0	0	5.3	0.152	0	0.59	22.2	28.2	134.6	21.57	156.1	127.8
22	0	0	5.3	0.152	0	0.59	22.9	28.9	135.9	21.57	157.5	128.5
23	0	0	5.3	0.152	0	0.59	23.6	29.6	137.3	21.57	158.8	129.2
24	0	0	5.3	0.152	0	0.59	24.3	30.3	138.7	21.57	160.2	129.9
25	0	0	5.3	0.152	0	0.59	25.0	31.0	140.0	21.57	161.6	130.5
26	0	0	5.3	0.152	0	0.59	25.7	31.8	141.4	21.57	163.0	131.2
27	0	0	5.3	0.152	0	0.59	26.5	32.6	142.9	21.57	164.4	131.8
28	0	0	5.3	0.152	0	0.59	27.3	33.4	144.3	21.57	165.9	132.4
29	0	0	5.3	0.152	0	0.59	28.1	34.2	145.7	21.57	167.3	133.1
30	0	0	5.3	0.152	0	0.595	29.0	35.0	147.2	21.57	168.8	133.7
31	0	0	5.3	0.152	0	0.595	29.3	35.3	148.7	21.57	170.2	134.9

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

Year	Cost								Benefits			Net benefits (L=K-H)
	Hydropower plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
32	0	0	5.3	0.152	0	0.595	29.6	35.6	150.1	21.57	171.7	136.1
33	0	0	5.3	0.152	0	0.595	29.9	35.9	151.6	21.57	173.2	137.3
34	0	0	5.3	0.152	0	0.595	30.20	36.2	153.2	21.57	174.7	138.5
35	0	0	5.3	0.152	0	0.595	30.51	36.5	154.7	21.57	176.3	139.7
36	0	0	5.3	0.152	0	0.595	30.81	36.8	156.2	21.57	177.8	141.0
37	0	0	5.3	0.152	0	0.595	31.12	37.1	157.8	21.57	179.4	142.2
38	0	0	5.3	0.152	0	0.595	31.43	37.4	159.4	21.57	181.0	143.5
39	0	0	5.3	0.152	0	0.595	31.75	37.7	161.0	21.57	182.5	144.8
40	0	0	5.3	0.152	0	0.595	32.06	38.1	162.6	21.57	184.2	146.0

Attachment 2: Alternative 2 Cost Benefit Analysis

Year	Cost								Benefits			Net benefits (L= K-H)
	Hydropower plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
1	111	0	0	0	10.381	0.282	4.48	126.1			0	-126.1
2	111	0	0	0	0	0.282	4.93	116.2			0	-116.2
3	111	7.6	0	0	0	0.282	5.42	124.3			0	-124.3
4	111	7.6	0	0	0	0.282	5.96	124.8			0	-124.8
5	0	0	4.44	0.152	0	0.282	6.56	11.4	68.7	12.93	81.6	70.2
6	0	0	4.44	1.152	0	0.282	7.21	13.1	69.4	12.93	82.3	69.2
7	0	0	4.44	2.152	0	0.282	7.94	14.8	70.1	12.93	83.0	68.2
8	0	0	4.44	3.152	0	0.282	8.73	16.6	70.8	12.93	83.7	67.1
9	0	0	4.44	4.152	0	0.282	9.60	18.4	71.5	12.93	84.4	65.9
10	0	0	4.44	5.152	0	0.282	10.57	20.4	72.2	12.93	85.1	64.7
11	0	0	4.44	6.152	0	0.282	11.31	22.1	72.9	12.93	85.8	63.7
12	0	0	4.44	7.152	0	0.282	12.10	23.9	73.6	12.93	86.6	62.6
13	0	0	4.44	8.152	0	0.282	12.95	25.8	74.4	12.93	87.3	61.5
14	0	0	4.44	9.152	0	0.282	13.85	27.7	75.1	12.93	88.1	60.3
15	0	0	4.44	10.15	0	0.282	14.82	29.6	75.9	12.93	88.8	59.1
16	0	0	4.44	11.15	0	0.282	15.86	31.7	76.6	12.93	89.6	57.8
17	0	0	4.44	12.15	0	0.282	16.97	33.8	77.4	12.93	90.3	56.5
18	0	0	4.44	13.15	0	0.282	18.16	36.0	78.2	12.93	91.1	55.1
19	0	0	4.44	14.15	0	0.282	19.43	38.3	79.0	12.93	91.9	53.6
20	0	0	4.44	15.15	0	0.282	20.79	40.6	79.7	12.93	92.7	52.0
21	0	0	4.44	16.15	0	0.282	22.25	43.1	80.5	12.93	93.5	50.3
22	0	0	4.44	17.15	0	0.282	22.91	44.7	81.3	12.93	94.3	49.5
23	0	0	4.44	18.15	0	0.282	23.60	46.4	82.2	12.93	95.1	48.6
24	0	0	4.44	19.15	0	0.282	24.31	48.1	83.0	12.93	95.9	47.7
25	0	0	4.44	20.15	0	0.282	25.04	49.9	83.8	12.93	96.7	46.8
26	0	0	4.44	21.15	0	0.282	25.79	51.6	84.7	12.93	97.6	45.9
27	0	0	4.44	22.15	0	0.282	26.56	53.4	85.5	12.93	98.4	45.0
28	0	0	4.44	23.15	0	0.282	27.36	55.2	86.4	12.93	99.3	44.0
29	0	0	4.44	24.15	0	0.282	28.18	57.0	87.2	12.93	100.1	43.1
30	0	0	4.44	25.15	0	0.282	29.03	58.9	88.1	12.93	101.1	42.1
31	0	0	4.44	26.15	0	0.282	29.32	60.1	89.0	12.93	101.9	41.7
32	0	0	4.44	27.15	0	0.282	29.61	61.4	89.9	12.93	102.8	41.3

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

33	0	0	4.44	28.15	0	0.282	29.91	62.7	90.8	12.93	103.7	40.9
34	0	0	4.44	29.15	0	0.282	30.20	64.0	91.7	12.93	104.6	40.5
35	0	0	4.44	30.15	0	0.282	30.51	65.3	92.6	12.93	105.5	40.1
36	0	0	4.44	31.15	0	0.282	30.81	66.6	93.5	12.93	106.4	39.8
37	0	0	4.44	32.15	0	0.282	31.12	67.9	94.4	12.93	107.4	39.4
38	0	0	4.44	33.15	0	0.282	31.43	69.3	95.4	12.93	108.3	39.0
39	0	0	4.44	34.15	0	0.282	31.75	70.6	96.3	12.93	109.3	38.7
40	0	0	4.44	35.15	0	0.282	32.06	71.9	97.3	12.93	110.2	38.3

Attachment 3: Alternative 3, Cost Benefit Analysis

Year	Cost								Benefits			Net benefits (L=K-H)
	Hydro power plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
1.00	95.00	0.00	0.00	0.00	4.57	0.16	1.49	101.21			0.00	101.21
2.00	95.00	0.00	0.00	0.00	0.00	0.16	1.64	96.80			0.00	-96.80
3.00	95.00	7.60	0.00	0.00	0.00	0.16	1.80	104.56			0.00	104.56
4.00	95.00	7.60	0.00	0.00	0.00	0.16	1.98	104.74			0.00	104.74
5.00	0.00	0.00	3.80	0.15	0.00	0.16	2.18	6.29	33.26	6.27	39.53	33.24
6.00	0.00	0.00	3.80	0.15	0.00	0.16	2.40	6.51	33.59	6.27	39.86	33.35
7.00	0.00	0.00	3.80	0.15	0.00	0.16	2.64	6.75	33.93	6.27	40.20	33.45
8.00	0.00	0.00	3.80	0.15	0.00	0.16	2.91	7.01	34.27	6.27	40.54	33.53
9.00	0.00	0.00	3.80	0.15	0.00	0.16	3.20	7.30	34.61	6.27	40.88	33.58
10.00	0.00	0.00	3.80	0.15	0.00	0.16	3.52	7.62	34.96	6.27	41.23	33.60
11.00	0.00	0.00	3.80	0.15	0.00	0.16	3.76	7.87	35.31	6.27	41.58	33.71
12.00	0.00	0.00	3.80	0.15	0.00	0.16	4.03	8.13	35.66	6.27	41.93	33.80
13.00	0.00	0.00	3.80	0.15	0.00	0.16	4.31	8.41	36.02	6.27	42.29	33.87
14.00	0.00	0.00	3.80	0.15	0.00	0.16	4.61	8.72	36.38	6.27	42.65	33.93
15.00	0.00	0.00	3.80	0.15	0.00	0.16	4.93	9.04	36.74	6.27	43.01	33.97
16.00	0.00	0.00	3.80	0.15	0.00	0.16	5.28	9.38	37.11	6.27	43.38	33.99
17.00	0.00	0.00	3.80	0.15	0.00	0.16	5.65	9.75	37.48	6.27	43.75	34.00
18.00	0.00	0.00	3.80	0.15	0.00	0.16	6.04	10.15	37.85	6.27	44.12	33.98
19.00	0.00	0.00	3.80	0.15	0.00	0.16	6.46	10.57	38.23	6.27	44.50	33.93
20.00	0.00	0.00	3.80	0.15	0.00	0.16	6.92	11.02	38.61	6.27	44.88	33.86
21.00	0.00	0.00	3.80	0.15	0.00	0.16	7.40	11.51	39.00	6.27	45.27	33.76
22.00	0.00	0.00	3.80	0.15	0.00	0.16	7.62	11.73	39.39	6.27	45.66	33.93
23.00	0.00	0.00	3.80	0.15	0.00	0.16	7.85	11.96	39.78	6.27	46.05	34.10
24.00	0.00	0.00	3.80	0.15	0.00	0.16	8.09	12.19	40.18	6.27	46.45	34.26
25.00	0.00	0.00	3.80	0.15	0.00	0.16	8.33	12.44	40.58	6.27	46.85	34.42
26.00	0.00	0.00	3.80	0.15	0.00	0.16	8.58	12.69	40.99	6.27	47.26	34.57
27.00	0.00	0.00	3.80	0.15	0.00	0.16	8.84	12.94	41.40	6.27	47.67	34.73
28.00	0.00	0.00	3.80	0.15	0.00	0.16	9.10	13.21	41.81	6.27	48.08	34.88
29.00	0.00	0.00	3.80	0.15	0.00	0.16	9.37	13.48	42.23	6.27	48.50	35.02
30.00	0.00	0.00	3.80	0.15	0.00	0.16	9.66	13.76	42.65	6.27	48.92	35.16
31.00	0.00	0.00	3.80	0.15	0.00	0.16	9.75	13.86	43.08	6.27	49.35	35.49
32.00	0.00	0.00	3.80	0.15	0.00	0.16	9.85	13.96	43.51	6.27	49.78	35.82
33.00	0.00	0.00	3.80	0.15	0.00	0.16	9.95	14.05	43.95	6.27	50.22	36.16
34.00	0.00	0.00	3.80	0.15	0.00	0.16	10.05	14.15	44.39	6.27	50.66	36.50
35.00	0.00	0.00	3.80	0.15	0.00	0.16	10.15	14.25	44.83	6.27	51.10	36.84
36.00	0.00	0.00	3.80	0.15	0.00	0.16	10.25	14.36	45.28	6.27	51.55	37.19

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37.00	0.00	0.00	3.80	0.15	0.00	0.16	10.35	14.46	45.73	6.27	52.00	37.54
38.00	0.00	0.00	3.80	0.15	0.00	0.16	10.46	14.56	46.19	6.27	52.46	37.90
39.00	0.00	0.00	3.80	0.15	0.00	0.16	10.56	14.67	46.65	6.27	52.92	38.25
40.00	0.00	0.00	3.80	0.15	0.00	0.16	10.67	14.77	47.12	6.27	53.39	38.61

Appendix 23: : Sensitivity Analysis (1)

Year	Cost								Benefits			Net benefits (L= K- H)
	Hydropower plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
1.00	132.53	0.00	0.00	0.00	21.74	0.60	7.47	162.34			0.00	-162.34
2.00	132.53	0.00	0.00	0.00	0.00	0.60	8.22	141.34			0.00	-141.34
3.00	132.53	7.60	0.00	0.00	0.00	0.60	9.04	149.76			0.00	-149.76
4.00	132.53	7.60	0.00	0.00	0.00	0.60	9.95	150.67			0.00	-150.67
5.00	0.00	0.00	5.30	0.15	0.00	0.60	10.94	16.99	114.81	21.57	136.38	119.39
6.00	0.00	0.00	5.30	0.15	0.00	0.60	12.03	18.08	115.96	21.57	137.53	119.45
7.00	0.00	0.00	5.30	0.15	0.00	0.60	13.24	19.28	117.12	21.57	138.69	119.40
8.00	0.00	0.00	5.30	0.15	0.00	0.60	14.56	20.61	118.29	21.57	139.86	119.25
9.00	0.00	0.00	5.30	0.15	0.00	0.60	16.02	22.06	119.47	21.57	141.04	118.98
10.00	0.00	0.00	5.30	0.15	0.00	0.60	17.62	23.67	120.67	21.57	142.24	118.57
11.00	0.00	0.00	5.30	0.15	0.00	0.60	18.85	24.90	121.87	21.57	143.44	118.54
12.00	0.00	0.00	5.30	0.15	0.00	0.60	20.17	26.22	123.09	21.57	144.66	118.44
13.00	0.00	0.00	5.30	0.15	0.00	0.60	21.58	27.63	124.32	21.57	145.89	118.26
14.00	0.00	0.00	5.30	0.15	0.00	0.60	23.09	29.14	125.57	21.57	147.14	117.99
15.00	0.00	0.00	5.30	0.15	0.00	0.60	24.71	30.76	126.82	21.57	148.39	117.63
16.00	0.00	0.00	5.30	0.15	0.00	0.60	26.44	32.49	128.09	21.57	149.66	117.17
17.00	0.00	0.00	5.30	0.15	0.00	0.60	28.29	34.34	129.37	21.57	150.94	116.60
18.00	0.00	0.00	5.30	0.15	0.00	0.60	30.27	36.32	130.66	21.57	152.23	115.92
19.00	0.00	0.00	5.30	0.15	0.00	0.60	32.39	38.44	131.97	21.57	153.54	115.10
20.00	0.00	0.00	5.30	0.15	0.00	0.60	34.66	40.71	133.29	21.57	154.86	114.16
21.00	0.00	0.00	5.30	0.15	0.00	0.60	37.08	43.13	134.62	21.57	156.19	113.06
22.00	0.00	0.00	5.30	0.15	0.00	0.60	38.20	44.24	135.97	21.57	157.54	113.30
23.00	0.00	0.00	5.30	0.15	0.00	0.60	39.34	45.39	137.33	21.57	158.90	113.51
24.00	0.00	0.00	5.30	0.15	0.00	0.60	40.52	46.57	138.70	21.57	160.27	113.70
25.00	0.00	0.00	5.30	0.15	0.00	0.60	41.74	47.79	140.09	21.57	161.66	113.87
26.00	0.00	0.00	5.30	0.15	0.00	0.60	42.99	49.04	141.49	21.57	163.06	114.02
27.00	0.00	0.00	5.30	0.15	0.00	0.60	44.28	50.33	142.91	21.57	164.48	114.15
28.00	0.00	0.00	5.30	0.15	0.00	0.60	45.61	51.66	144.33	21.57	165.90	114.25
29.00	0.00	0.00	5.30	0.15	0.00	0.60	46.98	53.02	145.78	21.57	167.35	114.32
30.00	0.00	0.00	5.30	0.15	0.00	0.60	48.39	54.43	147.24	21.57	168.81	114.37
31.00	0.00	0.00	5.30	0.15	0.00	0.60	48.87	54.92	148.71	21.57	170.28	115.36
32.00	0.00	0.00	5.30	0.15	0.00	0.60	49.36	55.41	150.20	21.57	171.77	116.36
33.00	0.00	0.00	5.30	0.15	0.00	0.60	49.85	55.90	151.70	21.57	173.27	117.37
34.00	0.00	0.00	5.30	0.15	0.00	0.60	50.35	56.40	153.21	21.57	174.78	118.39
35.00	0.00	0.00	5.30	0.15	0.00	0.60	50.86	56.90	154.75	21.57	176.32	119.41
36.00	0.00	0.00	5.30	0.15	0.00	0.60	51.36	57.41	156.29	21.57	177.86	120.45
37.00	0.00	0.00	5.30	0.15	0.00	0.60	51.88	57.92	157.86	21.57	179.43	121.50

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

38.00	0.00	0.00	5.30	0.15	0.00	0.60	52.40	58.44	159.44	21.57	181.01	122.56
39.00	0.00	0.00	5.30	0.15	0.00	0.60	52.92	58.97	161.03	21.57	182.60	123.63
40.00	0.00	0.00	5.30	0.15	0.00	0.60	53.45	59.50	162.64	21.57	184.21	124.71

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

(2)

Year	Cost								Benefits			Net benefits (L= K-H)
	Hydropower plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
1.00	132.53	0.00	0.00	0.00	21.74	0.60	4.48	159.35			0.00	-159.35
2.00	132.53	0.00	0.00	0.00	0.00	0.60	4.93	138.05			0.00	-138.05
3.00	132.53	7.60	0.00	0.00	0.00	0.60	5.42	146.14			0.00	-146.14
4.00	132.53	7.60	0.00	0.00	0.00	0.60	5.97	146.69			0.00	-146.69
5.00	0.00	0.00	5.30	0.15	0.00	0.60	6.56	12.61	91.84	21.57	113.41	100.80
6.00	0.00	0.00	5.30	0.15	0.00	0.60	7.22	13.27	92.76	21.57	114.33	101.06
7.00	0.00	0.00	5.30	0.15	0.00	0.60	7.94	13.99	93.69	21.57	115.26	101.27
8.00	0.00	0.00	5.30	0.15	0.00	0.60	8.74	14.78	94.62	21.57	116.19	101.41
9.00	0.00	0.00	5.30	0.15	0.00	0.60	9.61	15.66	95.57	21.57	117.14	101.48
10.00	0.00	0.00	5.30	0.15	0.00	0.60	10.57	16.62	96.52	21.57	118.09	101.48
11.00	0.00	0.00	5.30	0.15	0.00	0.60	11.31	17.36	97.49	21.57	119.06	101.70
12.00	0.00	0.00	5.30	0.15	0.00	0.60	12.10	18.15	98.46	21.57	120.03	101.89
13.00	0.00	0.00	5.30	0.15	0.00	0.60	12.95	19.00	99.45	21.57	121.02	102.02
14.00	0.00	0.00	5.30	0.15	0.00	0.60	13.86	19.90	100.44	21.57	122.01	102.11
15.00	0.00	0.00	5.30	0.15	0.00	0.60	14.83	20.87	101.45	21.57	123.02	102.15
16.00	0.00	0.00	5.30	0.15	0.00	0.60	15.86	21.91	102.46	21.57	124.03	102.12
17.00	0.00	0.00	5.30	0.15	0.00	0.60	16.97	23.02	103.49	21.57	125.06	102.04
18.00	0.00	0.00	5.30	0.15	0.00	0.60	18.16	24.21	104.52	21.57	126.09	101.88
19.00	0.00	0.00	5.30	0.15	0.00	0.60	19.43	25.48	105.57	21.57	127.14	101.66
20.00	0.00	0.00	5.30	0.15	0.00	0.60	20.79	26.84	106.62	21.57	128.19	101.35
21.00	0.00	0.00	5.30	0.15	0.00	0.60	22.25	28.30	107.69	21.57	129.26	100.96
22.00	0.00	0.00	5.30	0.15	0.00	0.60	22.92	28.96	108.77	21.57	130.34	101.37
23.00	0.00	0.00	5.30	0.15	0.00	0.60	23.60	29.65	109.85	21.57	131.42	101.77
24.00	0.00	0.00	5.30	0.15	0.00	0.60	24.31	30.36	110.95	21.57	132.52	102.16
25.00	0.00	0.00	5.30	0.15	0.00	0.60	25.04	31.09	112.06	21.57	133.63	102.54
26.00	0.00	0.00	5.30	0.15	0.00	0.60	25.79	31.84	113.18	21.57	134.75	102.91
27.00	0.00	0.00	5.30	0.15	0.00	0.60	26.57	32.61	114.31	21.57	135.88	103.27
28.00	0.00	0.00	5.30	0.15	0.00	0.60	27.36	33.41	115.46	21.57	137.03	103.62
29.00	0.00	0.00	5.30	0.15	0.00	0.60	28.19	34.23	116.61	21.57	138.18	103.95
30.00	0.00	0.00	5.30	0.15	0.00	0.60	29.03	35.08	117.78	21.57	139.35	104.27
31.00	0.00	0.00	5.30	0.15	0.00	0.60	29.32	35.37	118.96	21.57	140.53	105.16
32.00	0.00	0.00	5.30	0.15	0.00	0.60	29.61	35.66	120.15	21.57	141.72	106.05
33.00	0.00	0.00	5.30	0.15	0.00	0.60	29.91	35.96	121.35	21.57	142.92	106.96
34.00	0.00	0.00	5.30	0.15	0.00	0.60	30.21	36.26	122.56	21.57	144.13	107.87
35.00	0.00	0.00	5.30	0.15	0.00	0.60	30.51	36.56	123.79	21.57	145.36	108.80
36.00	0.00	0.00	5.30	0.15	0.00	0.60	30.82	36.86	125.02	21.57	146.59	109.73
37.00	0.00	0.00	5.30	0.15	0.00	0.60	31.12	37.17	126.27	21.57	147.84	110.67
38.00	0.00	0.00	5.30	0.15	0.00	0.60	31.44	37.48	127.54	21.57	149.11	111.62

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

39.00	0.00	0.00	5.30	0.15	0.00	0.60	31.75	37.80	128.81	21.57	150.38	112.59
40.00	0.00	0.00	5.30	0.15	0.00	0.60	32.07	38.12	130.10	21.57	151.67	113.56

(3)

Year	Cost								Benefits			Net benefits (L= K-H)
	Hydropower plant (A)	transmission system (B)	operating hydropower plant (C= 1% of Sum of A1 to A4)	operating transmission system (D=1% of D3+D4)	Env cost (E)	agr loss (F)	tourism loss (G)	total cost (H= Sum of A to G)	power sales (I)	Carbon emission reduction (J)	Total benefits (K= I+J)	
1.0	132.5	0.0	0.0	0.0	21.7	0.6	7.5	162.3			0.0	-162.3
2.0	132.5	0.0	0.0	0.0	0.0	0.6	8.2	141.3			0.0	-141.3
3.0	132.5	7.6	0.0	0.0	0.0	0.6	9.0	149.8			0.0	-149.8
4.0	132.5	7.6	0.0	0.0	0.0	0.6	9.9	150.7			0.0	-150.7
5.0	0.0	0.0	5.3	0.2	0.0	0.6	10.9	17.0	91.8	21.6	113.4	96.4
6.0	0.0	0.0	5.3	0.2	0.0	0.6	12.0	18.1	92.8	21.6	114.3	96.2
7.0	0.0	0.0	5.3	0.2	0.0	0.6	13.2	19.3	93.7	21.6	115.3	96.0
8.0	0.0	0.0	5.3	0.2	0.0	0.6	14.6	20.6	94.6	21.6	116.2	95.6
9.0	0.0	0.0	5.3	0.2	0.0	0.6	16.0	22.1	95.6	21.6	117.1	95.1
10.0	0.0	0.0	5.3	0.2	0.0	0.6	17.6	23.7	96.5	21.6	118.1	94.4
11.0	0.0	0.0	5.3	0.2	0.0	0.6	18.9	24.9	97.5	21.6	119.1	94.2
12.0	0.0	0.0	5.3	0.2	0.0	0.6	20.2	26.2	98.5	21.6	120.0	93.8
13.0	0.0	0.0	5.3	0.2	0.0	0.6	21.6	27.6	99.4	21.6	121.0	93.4
14.0	0.0	0.0	5.3	0.2	0.0	0.6	23.1	29.1	100.4	21.6	122.0	92.9
15.0	0.0	0.0	5.3	0.2	0.0	0.6	24.7	30.8	101.4	21.6	123.0	92.3
16.0	0.0	0.0	5.3	0.2	0.0	0.6	26.4	32.5	102.5	21.6	124.0	91.5
17.0	0.0	0.0	5.3	0.2	0.0	0.6	28.3	34.3	103.5	21.6	125.1	90.7
18.0	0.0	0.0	5.3	0.2	0.0	0.6	30.3	36.3	104.5	21.6	126.1	89.8
19.0	0.0	0.0	5.3	0.2	0.0	0.6	32.4	38.4	105.6	21.6	127.1	88.7
20.0	0.0	0.0	5.3	0.2	0.0	0.6	34.7	40.7	106.6	21.6	128.2	87.5
21.0	0.0	0.0	5.3	0.2	0.0	0.6	37.1	43.1	107.7	21.6	129.3	86.1
22.0	0.0	0.0	5.3	0.2	0.0	0.6	38.2	44.2	108.8	21.6	130.3	86.1
23.0	0.0	0.0	5.3	0.2	0.0	0.6	39.3	45.4	109.9	21.6	131.4	86.0
24.0	0.0	0.0	5.3	0.2	0.0	0.6	40.5	46.6	111.0	21.6	132.5	86.0
25.0	0.0	0.0	5.3	0.2	0.0	0.6	41.7	47.8	112.1	21.6	133.6	85.8
26.0	0.0	0.0	5.3	0.2	0.0	0.6	43.0	49.0	113.2	21.6	134.8	85.7
27.0	0.0	0.0	5.3	0.2	0.0	0.6	44.3	50.3	114.3	21.6	135.9	85.6
28.0	0.0	0.0	5.3	0.2	0.0	0.6	45.6	51.7	115.5	21.6	137.0	85.4
29.0	0.0	0.0	5.3	0.2	0.0	0.6	47.0	53.0	116.6	21.6	138.2	85.2
30.0	0.0	0.0	5.3	0.2	0.0	0.6	48.4	54.4	117.8	21.6	139.3	84.9
31.0	0.0	0.0	5.3	0.2	0.0	0.6	48.9	54.9	119.0	21.6	140.5	85.6
32.0	0.0	0.0	5.3	0.2	0.0	0.6	49.4	55.4	120.1	21.6	141.7	86.3
33.0	0.0	0.0	5.3	0.2	0.0	0.6	49.9	55.9	121.3	21.6	142.9	87.0
34.0	0.0	0.0	5.3	0.2	0.0	0.6	50.4	56.4	122.6	21.6	144.1	87.7
35.0	0.0	0.0	5.3	0.2	0.0	0.6	50.9	56.9	123.8	21.6	145.4	88.5
36.0	0.0	0.0	5.3	0.2	0.0	0.6	51.4	57.4	125.0	21.6	146.6	89.2
37.0	0.0	0.0	5.3	0.2	0.0	0.6	51.9	57.9	126.3	21.6	147.8	89.9

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

38.0	0.0	0.0	5.3	0.2	0.0	0.6	52.4	58.4	127.5	21.6	149.1	90.7
39.0	0.0	0.0	5.3	0.2	0.0	0.6	52.9	59.0	128.8	21.6	150.4	91.4
40.0	0.0	0.0	5.3	0.2	0.0	0.6	53.4	59.5	130.1	21.6	151.7	92.2

Appendix 23: Multi-criteria Analysis

	alternative 1	Alternative2	Alternative3	Weightage %
Scenario 1				
Technical evaluation	57.5	55	40	33
Socio-economic	48.21	39.29	32.14	33
Environmental	31.25	40.63	50	33
Score	45.19	44.52	40.30	
Scenario 2				
Technical evaluation	57.5	55	40	30
Socio-economic	48.21	39.29	32.14	35
Environmental	31.25	40.63	50	35
Score	45.06	44.47	40.75	
Scenario 3				
Technical evaluation	57.5	55	40	25
Socio-economic	48.21	39.29	32.14	50
Environmental	31.25	40.63	50	25
Score	46.29	43.55	38.57	
Scenario 4				
Technical evaluation	57.5	55	40	25
Socio-economic	48.21	39.29	32.14	25
Environmental	31.25	40.63	50	50
Score	48.61	47.48	40.53	
Scenario 5				
Technical evaluation	57.5	55	40	50
Socio-economic	48.21	39.29	32.14	25
Environmental	31.25	40.63	50	25
Score	42.05	43.88	43.03	
Scenario 6				
Technical evaluation	57.5	55	40	20
Socio-economic	48.21	39.29	32.14	40
Environmental	31.25	40.63	50	40
Score	48.53	45.84	38.85	

Appendix 24: Stakeholder Consultation Meeting at JINJA

REPORT ON THE DISTRICT LEVEL CONSULTATIVE MEETING ON THE KALAGALA OFFSET AREA ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT (ADDENDUM) HELD ON THE 19TH AUGUST, 2016 AT BRISK HOTEL JINJA

1.1 Introduction and background

The meeting was called by the Consultant ERM in JV with NESS and ECU and it was attended by 58 participants' (twelve ladies and 46 men) from district Local Governments' of Jinja, Buikwe, Kayunga and Kamuli that the project footprint passes through and the Tour Companies that operate businesses of rafting and Kayaking along the Nile and their business are going to be affected within the Kalagala Offset Area. Invitation letters were delivered to the respective offices followed by phones to ensure participation in the meeting. The participations in the meeting were from the following institutions:

- i. Technical officers from District Local Governments' of Jinja, Buikwe, Kayunga and Kamuli
- ii. Save Adventure Tourism.
- iii. Tourism operators
- iv. Ministry of Energy and Mineral Development (MEMD)

1.2 Objectives of the meeting

To consult and obtain information and data for analysis and inclusion in the ESIA (Addendum) and Long-term Conservation report (LTCO).

1.3 Presentations and documentation

Each consultant made a power point presentation on their area of expertise in relation to the study and followed by a discussion on each presentation for clarify and information. Presentations made included:

- i. MEMD-over view of the assignment in relation to the KOA and environment aspects.
- ii. Save Adventure Tourism: Dam development alternatives and the implications for rafting.
- iii. Social dimensions of the study.
- iv. Tourism potential
- v. Fisheries

All participants were given equal opportunity to raise their concerns and appropriate response given by the relevant entity or Consultant.

The information obtained from the participants will be documented in the ESIA and LTCO.

After the presentations, participants were given opportunity for discussion of the presentations and thereafter participants were divided into groups per district and tourism operators alone. The participants then presented the group Responses to the guiding questions that were presented to them by the Consultants. Other participants were allowed to make additions or ask questions in relation to the presentations made. The consultants and Ministry of Energy and Mineral Development made clarifications on some of the issues raised by the participants. Key issues raised included:

- i. The number of rapids that will be lost.
- ii. The boundary of the KOA in accordance with the Indemnity Agreement and the Kalagala Offset Sustainable Management Plan and who gave guidance on which map to adopt for the exercise.

- iii. Compensation of tourism and general compensation.
- iv. Inadequate public consultations and share of information
- v. Tourism issues raised during the meeting

Jinja Tourism Operators Stakeholder meeting – 19th August 2016

Issue	Description
1	They have submitted all the documentation for compensation, they have not received feedback and why is more information being asked for?
2	Feel betrayed that KOA set up by indemnity Agreement which they had based on to invest in tourism is also being partially inundated?
3	Lost confidence in the whole process therefore do not see the reason why they should believe that the remaining tourism resources in the KOA will be protected and effective mitigation measures put in place?
4	Rafting and Kayaking are the key activities driving the whole tourism sector in KOA and Jinja region on general?
5	Inundation of key rapids including Nile Special will imply the Nile being less attractive to international rafters and Kayakers?
6	Vengeance rapids will most likely not be viable for use since the dam will either inundate the rapid or the rapid will be mild since the river will lose velocity being too near the reservoir. The Impact assessment report mentioning Vengeance will not be affected is not true.
7	Rafting and Kayaking activities will no longer be viable with the remaining rapids, hence most of them are considering winding up their businesses.
8	Can only operate half day trips since rapids are few and river length not adequate for full day trips. Most tourists may not be motivated by half day trip.
9	Closure of tourism businesses will negatively affect tourism business operators and eventually tourism development in the KOA.
10	Community livelihoods will negatively be affected with reduced business from operators resulting in unemployment and increased crime rate.
11	Reduced business will negatively impact – directly or indirectly on businesses in Jinja Town where most Rafters and Kayakers buy supplies, use restaurants, bars, entertainment facilities, among others
12	KOA Management Plan exists but its largely unimplemented – river bank degradation and deforestation still on going and this further threatens tourism activities such as bird watching.
13	They not aware of the Kalagala-Itanda Ecotourism plan (2010-2019) that was drawn up as an appendix to the KOA Management Plan.
14	Expansion of KOA will not make any difference since even the existing KOA has not fully served its purpose of conserving the resources there in.
15	They are very reluctant to reinvest in alternative tourism activities since they have no assurance (no legally binding assurance) that even the expanded KOA resources (especially rapids) will again not be lost by another dam (or any other construction).

Recommendations/way forward

1. Establish an open communication mechanism between Ministry of Energy and Mineral Development (MEMD) and the community where they can receive timely response and updates.
2. Another meeting should be organised targeting tourism operators and key Government Agencies to enable the Tourism Operators fully articulate their issues.
3. Tourism Operators to make a presentation at the Government Agencies stake holder meeting to take place the following week.
4. Ensure all conservation laws are enforced to ensure river banks are not degraded.
5. Need for reassurance of the protection of the KOA from further destruction.
6. Outcomes of compensation decisions be disclosed early enough for operators to plan early.
7. Specific dates when flooding is going to begin should be communicated to the community for planning purposes.

Appendix: List of persons consulted

CONSULTANCY FOR THE ASSESMENT OF THE IMPACT OF THE ISIMBA HYDROPOWER PROJECT ON THE KALAGALA OFF SET AREA

Participants Met Attendance Sheet

Date 19th AUGUST 2016

Venue BALICK HOTEL (JINJA)

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
1	MULOMBO YUSUF	BUKWE DISTRICT	PLANNER	✓		0773456330 ymulombo@yahoo.com	
2	ISABIRYE ROBERT	KAMULI DISTRICT	DNRO	✓		0772361135 alupar@yahoo.com	
3	MBAZIRA ROBERT	KAYUNGA DISTRICT	SICOMITY CHIEF KANGULUMIRA	✓		0782871469 mbazirarobert@gmail.com	
4	NAYIGA YUSUF	BUKWE DISTRICT	DEPARTMENT OFFICER		✓	0703014456 nggkha@yahoo.com	
5	LUKABOE FRANK	BUKWE DISTRICT	Land officer	✓		0774893982 lukaboefrank@yahoo.com	
6	MUKWASHI BAMEKA DAVIDA	KAMULI DISTRICT	SAS KISORIYO	✓		078668879 0752355753	

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
7	MAWANDA JOHNSON	Kimuli District KISOZI 8/c	CDO KISOZI	<input checked="" type="checkbox"/>		0756871809 0776871809	
8	SSEWANYA KIGANDA SAM	Bukwe District	DPO	<input checked="" type="checkbox"/>		0787961375 070444639	
9	KAYUWA ARITHUR	Bukwe District	DPO	<input checked="" type="checkbox"/>		0772534501	
10	Bakaya Ca Ruth	Bukwe District	DFO	<input checked="" type="checkbox"/>		0775 95004	5015

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
11	BULUMBA TIMOTHY	KAMUKU DISTRICT LOCAL GOVT	REGISTRAR OF TITLES/ A.G LAND OFFICER	<input checked="" type="checkbox"/>		0774723775 bulumbat@gmail.com	50000/
12	KITAKULE NATHAN	JINJA DISTRICT	For CAO	M		0782-184142 nathan.kitakule@yaho.com	30,000/
13	Jeff B'landi	SATI	Head	<input checked="" type="checkbox"/>		0701791357 b'landi2011@yahoo.com	
14	Egesa	KIN	Instructor	<input checked="" type="checkbox"/>		0782947432	
15	Sam Ward	Love it live it	owner	<input checked="" type="checkbox"/>		0791880322 sam@loveitliveit.co.uk	
16	Katuumbe Caroline	DPO's office Bukwe	officer	F		0783206314/ 0702542125 katuumbe.caroline@gmail.com	50,800/

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
17	JOSÉPH MALAHAI	C/PERSON LEV (LOCAL FISZISIC)	C/PLETHI (KISIZI)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0752347579	
18	KIBIRIGE ABBEY	Natural Resource Officer	Burkwe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0700900985	
19	WANSWA FRED	JINJA DISTRICT	DIST. LANDS OFFICER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0776633331 Wainswaf@yahoo.com	
20	BARUZALIRE	JINJA DISTRICT	NATURAL RESOURCES OFFICER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	fbanzalire@yahoo.com	
21	BUYINGZI Sula	JOLG.	for physical planner	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0702873461 buyingzi.sula@gmail	

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
22	BUMBUKO FRED	KAMULI DLG	PHY-PLANNER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	077239 0772396682	
23	JALWINY SILIMANI	KAMULI DLG.	DCAO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0772613634 jalwiny.silimani7644@gmail.com	
24	BAKAKI SAMUEL	KAMULI DLG	DISTRICT ENVIRONMENT OFFICER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0775056454 sbakaki@yahoo.co.uk	
25	BANAFAMU ROBERT	KAMULI DLG	PLANNER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0772634999 b.banafamum@gmail.com	
26	Oliver Johnson	Burkwe DLG	d/Eng	<input checked="" type="checkbox"/>	<input type="checkbox"/>	olavajohnson@gmail.com 0772453616	
27	MONIC MUKA	KALGA	C/person Lev	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mukasamonic@gmail.com 0752478420	

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
28	LUGADA RICHARD	KAMUNU DISTRICT LG	District Community dev't officer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0754177 807, 0774177807 lugadonrichard@yahoo.com	
29	KRAMIRIKE FAJUMA	KAMUNU DISTRICT	FOR SENIOR LABOUR OFFICER	<input type="checkbox"/>	<input checked="" type="checkbox"/>	07518 285 88 kramirikefajuma@gmail.com	
30	KANYIKI GEORGE	KAYUNGA DISTRICT	FOR DISTRICT ENGINEER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0700330 900 1988willi@gmail.com	
31	WUBOYI PAUL	KAYUNGA DISTRICT	Water officer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0774321031 wuboyipaul34@gmail.com	
32	KACHOPE PATRICK	KAMUNU DISTRICT	DIST. INTERIM SECURITY OFFICER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	kachopet@yahoo.com 0772623518	

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
33	MUSANT TIMOTHY	JINJA DISTRICT	LABOUR OFFICER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0758284680 timothymusant@yahoo.com	
34	MUBIRU NATHAN	JINJA DISTRICT	DISTRICT PLANNER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0772586258 nathanmubiru@yahoo.com	50,000/-
35	WALUSIKI ANDREW	JINJA DISTRICT	DCNO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0702616524 walusikiandrew@yahoo.com	
36	DUMA GEOFFREY	District physical planner Kayunga	District Physical Planner Kayunga	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0774-666-013 wagerondg@gmail.com	
37	SENTEUKA SIMON PETER	KAYUNGA DISTRICT	Senior land management officer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0783679879 senteukasimon@gmail.com	
38	BASWIGA EDIGAW	KAYUNGA DISTRICT	District Officer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0777425572 edigawbaswiga@gmail.com	50,000/-

	Name	Organization	Designation	Gender (Tick as applicable)		Contact Details (Tel/email address)	Signature
				M	F		
45	Megan Flowers	Adrift Rafting	Bookings & Reservations		<input checked="" type="checkbox"/>	* info@adrift.ug * 0776237438	
46	WILL CLARK	NALUBALE RAFTING	MANAGING DIRECTOR	<input checked="" type="checkbox"/>		will@nalubalerafting.com 0751614365	
47	WASSWA ARTHUR	NALUBALE RAFTING	MARKETING MANAGER	<input checked="" type="checkbox"/>		bookings@nalubalerafting.com 0782638938	
48	AGUTTU ROSELINE	Karigulimira Subcounty	CDO		<input checked="" type="checkbox"/>	0772040616 rrmmma2006@jabar.co.ug	
49	Kafeero Collins	KAYUNGA DIST. LG	Labour & Productivity	<input checked="" type="checkbox"/>		0772438132 Collinskafeero@gmail.com	
50	Balminkimisi MUSA	BUMBE DC	DNRD Founder	<input checked="" type="checkbox"/>		0752625062 balminkimisi@gmail.com	
51	Prossy Mirembe	White Nile Rafting				078236257	
52	SSERUNJOJI EDWARD	DRIVER					
53	MUSISI ASUMANI	DRIVER					

**Appendix 25: Stakeholder Consultation Meeting, Kampala
REPORT ON THE CONSULTATIVE MEETING ON THE KALAGALA OFFSET
ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT ADDENDUM HELD ON THE
22ND AUGUST, 2016 AT ROYAL SUITES BUGOLOBI, KAMPALA DISTRICT**

1.1 Introduction and background

The meeting was called by the Consultant ERM in JV with NESS and ECU and it was attended by 27 participants' four ladies and 23 men from government Ministries, Departments and Agencies that have a mandate on the various aspects pertaining Kalagala Offset Area. Invitation letters were delivered to the respective offices followed by phones to ensure participation in the meeting. The participations in the meeting were from the following institutions:

- v. Save Adventure Tourism.
- vi. Ministry of Water and Environment (Department of Wetlands, Environmental Affairs, Directorate of Water Resources Management).
- vii. National Forestry Authority (NFA).
- viii. Ministry of Gender, Labour and Social Development (Departments of Occupational Health and Safety, Family and Cultural Affairs, and Gender).
- ix. Ministry of Tourism, Wildlife and Antiquities' (MTWA).
- x. Ministry of Agriculture, Animal Industry and Fisheries.
- xi. National Fisheries Resources Research Institute (NAFIRRI).
- xii. Ministry of Energy and Mineral Development (MEMD)
- xiii. Uganda Electricity Generation Company (UEGCL).

Absent with apology

Uganda Electricity Transmission Company Ltd.

Absent without apology

1. National Environment Management Authority (NEMA).
2. Department of Community Development, Ministry of Gender, Labour and Social Development.

1.2 Objectives of the meeting

To consult and obtain information and data for analysis and inclusion in the ESIA (Addendum) and Long-term Conservation report (LTCO).

1.3 Presentations and documentation

Each consultant made a power point presentation on their area of expertise in relation to the study and followed by a discussion on each presentation for clarify and information. Presentations made included:

- vi. MEMD-over view of the assignment in relation to the KOA and environment aspects.
- vii. Save Adventure Tourism: Dam development alternatives and the implications for rafting.
- viii. Social dimensions of the study.
- ix. Tourism potential
- x. Fisheries

All participants were given an equal opportunity to raise their concerns and appropriate response given by the relevant entity or Consultant.

The information obtained from the participants will be documented in the ESIA and LTCO.

After the presentations questions relating to the assignment were asked in the plenary and each participant given an opportunity to present their views due to time limitations to break into groups. The questions included:

- i. What are the expected environmental and social concerns of Isimba HPP within the land and water boundaries of the KOA in the operation phase?

- Inundation area

- Aquatic biodiversity

- Spiritual values

Cultural heritage and creative art, values, totems will be lost but intangible benefits will be retained. The MoGLSD has a Youth Livelihood Program whose activities can be incorporated in the KOA, and there is registration of all persons engaged in cultural tourism at the district.

- Tourism and recreation

ii. What are the possible mitigation measures?

Participants indicated the need for dam revenue, electricity extension to the villages around the KOA, practice smart agriculture, restoration of sites, establishment of systems, and development of activities in the KOA by each Ministry with a mandate in the KOA for joint implementation.

iii. What can be considered during the development of alternative offset area?

iv. How can we sustainably manage the 100 metre river bank?

Demarcate the area, enforce acquisition of relevant permits and strict adherence to permit conditions, test of water quality, identify the threats, establish the water demands, area flooding limits, water levels, use of a holistic approach, and development of catchment management Plans.

v. How can we sustainably manage the Kalagala offset area?

vi. What legislative requirements are available for sustainably securing the area?

1.4 Key issues raised

i. Compensation for loose of tourism business by the tourism operators and compensation for the ecosystem services (fish breeding grounds, wetlands).

The Rafters indicated there are no alternative tourism activities that they can engage in and prefer cash compensation which they will invest in establishment of a camp along the Nile. They indicate grade 5 rapids can't be rafted

ii. Alternatives to livelihoods for both the tourism operators and communities in the KOA and dam reservoir alternatives to conserve tourism opportunity on rafting and kayaking.

iii. The impact of the dam construction on fisheries biodiversity i.e. extinction, relocation to maintain heritage, mitigation options.

iv. Catchment protection of the 100 metres and the land in the KOA that is outside protected areas. Directorate of water resources management indicated the existence of Water Source Catchment and Protection Guidelines which could be adopted.

v. Payment of Royalties' which is enshrined in the law e.g. 5% dam revenue paid for conservation of the area. UEGCL indicated that the royalties are indicated in the law and shall be paid to the local government who could then use it for conservation purposes.

vi. Kalagala Offset Sustainable Management Plan

A number of issues were raised relating to Kalagala Offset Sustainable Management Plan. Why redraw the map of the KOA? What does the Indemnity Agreement state? Is the flooding of the reservoir an advance impact? What should be the actual concerns in the KOA? There is need to carry out an Economic valuation of the rapids that will be lost,

the spanning grounds, river banks buffer zone and what is the contribution of Isimba to the management of the KOA.

Vii. Social issues, National level consultative meeting: issues raised by the stakeholders during the plenary session

Serial No.	Issue
1.	Under the Bujagali Project, there was a component that encompassed the restoration of the forest cover lost. However, during the implementation period, the responsibility of restoration of the forest cover was allocated to one individual. Under such arrangements, the benefits from such a forest are not evenly distributed to the entire community but to an individual. What is the rationale for such decisions?
2.	At the time the Bujagali dam was constructed, there was blasting of the rocks. As a result of this blasting, people in the communities around experienced cracks in their buildings but when they raised this with the contractors, no concrete solution was provided. As local leaders, we presented this issue to the President when we had a meeting with him at his country home but because we could not provide proof as to whether the cracks on people's buildings were as a result of the dam, we lost the argument.
3.	During the planning phase of projects of this nature, the physical planning aspect should be part of the assessment because in Bujagali, this aspect was not planned for and right now if one went there, a slum area has developed right at the door steps of the project area. Such scenarios should be avoided in future projects.
4.	Right now the entire river banks of The Nile have been sold off to private developers. What is going to happen to these private developers now that you are talking of conservation?
5.	Usually there are family breakdowns especially when the man gets the compensation for the assets affected by the project. Sometimes the spouses are left to fend for the household and the man moves on with a new spouse at the expense of the entire family left behind.
6.	Sometimes these projects attract people from other areas to the project location who come looking for employment. However, in most cases they do not come with their partners and instead start encroaching on peoples' women from within or around the project area. How will our communities be guarded against such incidents happening this time around since these people have money that they are willing to spend on people's partners?
7.	Child pregnancies are also common occurrences and are sometimes observed at project areas. What is in place to safeguard our girl child?
8.	Related to the above, issues of HIV/AIDS need to be planned for so their impact in the communities is prevented.
9.	We have a case where project workers got into a relationship with a girl from the project area. When the project ended, this worker (read Pakistani) went back to their country, leaving the children behind. Because of their colour, these children are looked at as outcastes and the father to the girl has a lot of challenges with keeping these children as a result. We pray such incidents are not repeated in this coming project.
10.	In the resettlement planning, it sometimes happens that a household is resettled in a small plot of 100 x 50ft. why should it happen like this?
11.	Issues of delayed compensation do occur. Why would people not be compensated in time so they are able to move on to replace their lost assets?
12.	Economically, what is basically the benefit of this project to the locals?
13.	Investors do not pay taxes to the local governments. When the local authority tries to raise tax issues with the investor, they are misinterpreted as trying to sabotage the investor. There should be a condition in place for a share between the central and the local governments.

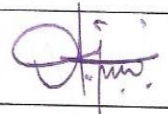
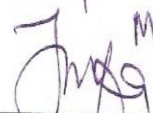
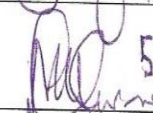

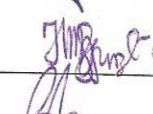
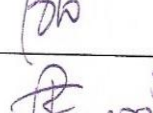
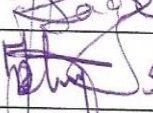
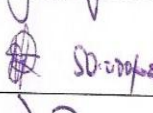
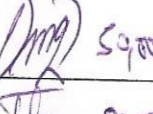
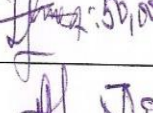
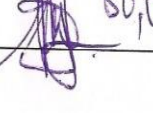

14.	When will all the people/ businesses be kicked out of the land they are currently occupying as a result of the project coming in?
15.	Why is it that the project at Isimba is going on yet there are unresolved issues that are being handled by courts of law?

Way forward

1. Look at the issue of sustainability, power relations and gender in pursuit of locally embraced development.
2. Need for the consultants to move down to the districts to look at the information needs on shrines and identify who to engage with.
3. There is need to emphasize public involvement and engagement; and in order to achieve this, access to information especially about the project should be encouraged.

List of persons who attended the meeting

ATTENDANCE LIST FOR ERMC/ MINISTRY OF ENERGY CONSULTANTIVE MEETING

NO	NAMES	DESIGNATION	DATE	SIGNATURE
✓ 01	Dr. Jim Ayonkine	Consultant ERMC	22/08/16	
✓ 02	Dr. Rukungu Edward	Ag Director Fisheries	22/10/16	 MM
✓ 03	Dr. Timothy Twango	Consultant ERMC	22/08/16	 50,0
✓ 04	Dr. Ogutu-Okwayo	Scientist-NAFREL	22/08/16	 50
✓ 05	Natugonzo Vianny	Fisheries Resemb-NAFREL	22/08/2016	 50
X 06	M Baye Seck LO	ECU inc-Consultant Partner	22/08/2016	 50
✓ 07	Barthelemy Kumbouzel	Softing	22/8/16	 50
✓ 08	Cheptoeke David	Ag. Principal Water Officer	22/8/2016	 50
✓ 09	Turnsine Nicholas	Water Officer	22/8/2016	 50
✓ 10	Dusabe Herbert	Legal Consultant	1	 50,000
✓ 11	GILBERTI NINIA	W/EA	22/08/16	 50,000
✓ 12	Mafumbo Julius	Principal Environment Officer / MWE/DEA	22/8/2016	 50,000

Addendum Environmental and Social Impacts of Isimba Hydropower Project on the Kalagala Offset Area

* 13	Dr. Toran Shama	Representative NESA Council	22/06/16	Shama
✓ 14	Mkonge Douglas	Principal Safety Inspector Min. of Gender, Labour & Soc. Dev.	22/08/2016	Mkonge 50
✓ 15	Jane N. Ekapa	PGO / MGRSD	22/08/2016	Ekapa
✓ 16	AGUI. CAROLINE	SPO/ENV	11	Agui 20000
✓ 17	William Damulira	ECU C.O.	11	50,000
✓ 18	Willie Epalitari	ECU	11	50
✓ 19	RUKUNDO Tom	NITA / EIAS	22/08/16	Rukundo
* 20	Uddab Raj Chaulagain	ERM (P.) Ltd.	22/08/16	Uddab Raj
✓ 21	Dorah Musimire	MGRSD	22/08/16	Musimire 50
✓ 22	Alex Bwani	Uganda Electricity Gen. Co. Ltd	22/08/16	50,000
✓ 23	Ohni Moses	"	24/08/16	Ohni 50
✓ 24	Drivers 4			40000
✓ 25	Lyoni Vivian	Ministry of Tourism	22/08/16	Lyoni 5000
✓ 26	Jeff Bideri	Scenic Adventure Tourism	22/08/16	Jeff Jeff

27	Makuly Ivan	Rafly	22/08/2016	Makuly 50000
28	Patrice Hotel Assistant	Royal Suite	O.P.O.	10,000

Appendix 26: General Safety and Environmental Rules for Contractors

1 Purpose and Scope

This document establishes the minimum environmental and safety requirements to be followed by a contractor at KFS. The intent of these requirements is to safeguard the ecology of KFS and prevent untoward incidents. The contractor representative is expected to convey the contents of this document to the field employee(s) and any subcontract employee(s) they may utilize to complete a project.

2 Policy

Modified KFS related Procurement issued by implementing provides this document to all contractor's representatives while issuing any contract purchase agreement. Neither the requirements of this clause nor any act or failure to act by implementing agencies shall relieve contractor of any responsibility or liability for the safety of the modified KFS ecology, or public, or contractor personnel.

Any deviations from these requirements will be considered a breach of contract. Any action taken by a contractor deemed a violation of environmental or safety requirements shall be stopped by a coworker or by Implementing Agency Representative until such finding is corrected. Implementing Agencies expect contractors to take appropriate disciplinary action for worker non-compliance. Deviations are subject to an internal review which can result in a written warning up to contract termination.

During work activities, the contractor shall coordinate their work and communications with designated Implementing Agency Representative⁵² (IAR) and the Environmental Officer of the district. The IAR will be the primary contact, and District Environmental Office will provide additional direction and approvals for safety and environmental expectations. The contractor, however, is solely responsible for the supervision, conduct and control of their workers, themselves, and their subcontractors while performing work on modified KFS geographical limits.

3 Compliance Requirements

A.1 General

I. Legal Provisions

⁵² Contract Awarding Agency refers to MoWE and Co-partnering Agencies involved in the KOA SMP

Contract Awarding Agencies expect contractor's to comply with all central and local government's safety, health and environmental requirements which include but are not limited to the following:

- The Constitution of the Republic of Uganda
- The Public Health Act Cap 281 L.O.U
- The Water Act Cap 152 L.O.U
- The Land Act Cap 227 L.O.U
- The Investment Code Act Cap 92 L.O.U
- The National Environment Act Cap 153 L.O.U
- The Employment Act Cap 219 LOU and The Employment Regulations, Statutory Instrument No. 41 of 1977; (Formerly known as The Employment Decree No. 4 of 1975).
- The Minimum Wages Advisory Boards and Wages Councils Act Cap 221 LOU.
- The Workers Compensation Act Cap 225 LOU ((Formerly known as The Workers Compensation Act No 8 of 2000).
- The Trade Disputes (Arbitration and Settlement) Act Cap 224 LOU (Formerly known as The Trade Disputes (Arbitration and Settlement) Act as amended by Decree 18 of 1974.)

II. Security

Each and every contractor's employee must wear a badge when working on modified KFS geographical limits. To obtain a badge, the contractor will request with the details of the contractor's personnel to the IAR at least a week before the engagement of the personnel at work.

III. Expectations of Contractor Management

The contractor shall

- a. Designate a lead representative. The IAR will be provided the name and telephone number of the Contractor Representative (CR) to be reached at any time in the event of an emergency. The CR shall be familiar with the central and local governments Acts and Regulations used in the performance of their work with the most stringent requirement implemented on the project. The CR

- shall keep an organized binder with environment and safety related documentation.
- b. Prepare Environment Hazard Analysis (EHA) and Job Hazard Analysis (JHA) for construction project. EHA and JHA will contain table listing the steps, hazards, and controls as well as emergency procedures. It is expected the IAR to consult with the District Environmental Officer to review EHA and JHA prior to initiating the project. The contractor is expected to review its contents and sign the EHA and JHA indicating they will comply with the contents prior to initiating the project.
 - c. Provide alternative staging sites close to the project for construction camp, equipments, storage of materials, and vehicle parking etc. required for smooth facilitation of construction works to IAR. It is expected the IAR will review the alternative staging sites in the field and give his/her approval from among alternative sites or a new site. Contractor will prepare and submit layouts of various construction facilities in the selected staging site showing details of sanitation, drainage, storage and hazardous non-hazardous materials, , water supply facilities, fire fighting facilities to IAR for approval consent. The contractor is expected to review the staging site layout and facilities and sign the layout plan indicating they will comply with the layout prior to initiating the project.
 - d. Conduct an onsite environmental requirements and safety training to all the workforce of the contractor detailing the environmental and safety risks of the project as outlined in EHA and JHA to ensure they understand the steps to be taken for each of the risks/hazard for control.
 - e. Host a pre-briefing environment and safety meeting prior to construction works at each construction site every day. The meeting will include reporting all incidents related to environment and safety including first aid and near misses “no matter how minor” of the earlier day.
 - f. Host a weekly Environment and safety “tailgate” meeting with all workers including sub-contractors under the supervision of CA. The contractor should also solicit the opportunity for a worker to present a topic for discussion applicable to the project. Structure the meeting as follows:
 - i. Topic shall be relevant to the project's environment and safety.
 - ii. Refresh employee incident reporting procedures

- iii. Allow a question and answer period.
 - iv. A sign-in sheet, including the topic, date of meeting, and the presenter's name along with any associated training material will be retained on site for the duration of the project
-
- g. Provide a copy of their environmental safety and health programs including injury and illness prevention program as well as employee training records upon request of IAR.
 - h. Maintain project construction and staging site conditions by conducting routine housekeeping to prevent dust or chemical exposure as well as slips, trips and falls
 - i. Cover trash bins, berm and cover excavated soil as well as berm and screen storm drains prior to inclement weather.
 - j. Obtain/verify the necessary licenses, registrations, certifications, and permits are available per the central and local government regulation/ordinance for the work being performed
 - k. Provide Personnel Protective Equipment (PPE) appropriate for the work, maintained in good condition, and oversee they are used correctly by the workers and sub-contractors
 - l. Place barricades around the active construction sites and project staging area with warning signs to warn employees on different hazards.
 - m. Ensure all equipment comply with manufacture requirements. Equipment shall be thoroughly inspected at the beginning of the work shift and repaired or pulled from service until such repairs can be done. Mechanical lifting equipment, fall protection equipment and scaffolds will require documented inspections.
 - n. Obey the speed limits and traffic signs.
 - o. Notify IAR, and District Environmental officer of an injury or illness on the day of the incident no matter how minor. Lead an incident "Stand Down" meeting no later than one business day after the incident to discuss the facts known of the incident and what preventative measures will be taken. Conduct an incident investigation and provide a report to IAR and District Environmental Officer within two business days of the incident. The incident report shall be in writing and include:

- i. A description of what happened,
 - ii. Type of incident,
 - iii. Cause and contributing factors and
 - iv. The corrective action(s) with a corresponding assignment representative(s) and due date(s).
- p. Monitor Environmental Safety and Health compliance continuously and conduct as well as document an inspection at least weekly. The inspection checklist shall represent applicable safety and environmental regulatory requirements for the works being implemented on the project. At a minimum, the inspection checklist will include housekeeping, tools, hazardous materials and PPE. The CR is responsible for developing their inspection checklist and conducting inspections. The CR will retain records of the inspections on the jobsite for the duration of the project. Both positive and negative findings of these inspections should be discussed in the safety meetings. Inspections results and/or trending data and analysis shall be available for workers, IAR and District Environmental Officer Review. Any negative findings shall be made safe by the contractor before continuing with the task. It is expected that any finding considered an “imminent danger” to environment and its employees that could cause serious consequences if repeated will be considered as violation and is subject to a IAR investigation which could result in suspension of works including contract termination.
- q. Provide access to the work site for inspection by appropriate IAR personnel.
- r. Contractor's Workers and Sub-contractor Conduct:
 - i. Firearms will not be brought onto modified KFS sites by workers either on a person or in a vehicle. This will be regarded as breach of contract.
 - ii. Any workers under the influence of alcohol or narcotics will not be allowed on modified KFS sites
 - iii. Possession of any intoxicants or narcotics will not be tolerated may result in a breach of contract.
 - iv. Unprofessional conduct, such as horseplay, wrestling, fighting, gambling, etc., is not permitted.
 - v. Under no circumstances shall contractor employees tamper with environmental/cultural resources of modified KFS

- vi. Obscene or abusive language; racial, gender, or ethnic slurs; immoral or indecent conduct; sexual harassment is not permitted
 - vii. Failure to follow specific instructions or specifications may result to breach of contract
 - viii. Deliberately damaging, defacing, or misusing facility property or the property of others may result to breach of contract
 - ix. Removing facility property from the premises, without appropriate authorization may result to breach of contract
- s. Take appropriate disciplinary action for worker and sub-contractor noncompliance in the following order:

For Workers and other employee of Contractor

- i. 1st Violation: documented verbal Warning
- ii. 2nd Violation: written warning
- iii. 3rd Violation: written notice and one day suspension without pay
- iv. 4th Violation written notice and one week suspension without pay
- v. 5th Violation :Dismissal from the work

For Sub-Contractor

- i. 1st Violation: documented verbal Warning
- ii. 2nd Violation: written warning
- iii. 3rd Violation: written notice and removal from the job site

4 Site Specific

I. Construction Staging Sites

a. Construction Work Camps

The contractor shall

- i. Arrange camp staging area located at least 200m away from the Nile river bank in an open ground requiring only weed clearance and minimum landscaping
- ii. Barricade the construction camp area with appropriate means with a gate guarded by a personnel to ensure security
- iii. Maintain cleanliness of the camp Area clear of trash and debris and in neat order.

- iv. Maintain access to construction camps at all times. Access to the camps will be restricted to construction workers and visitors with an authorized access pass only
- v. Construct 'mosquito-proof' residential and recreational facilities in the camps ensuring adequate sealing of doors and windows with provision of suitable ventilation and as necessary, installing mosquito-nets and other prevention devices
- vi. Provision fire fighting equipments at accessible places with clear instruction use when required
- vii. Accommodate all workers who are based on the construction site on construction camps
- viii. Provide appropriate sanitation facilities in accordance with international best practice
- ix. Establish a secured potable water storage facilities with access limited to authorized personnel. Water sources used by local communities will not be shared by the camps.
- x. Monitor the potable water used in the camps every months for chemical and bacterial pollutants
- xi. Implement medical, sanitary and disease prevention measures for each camp will be implemented in accordance with the Project's Personnel Health Program
- xii. Manage the waste generated at the construction camps in accordance with the requirements of Waste Management.
- xiii. Provide training to construction workers in health and safety issues relating to the camps in accordance with Environmental Training for Workers
- xiv. Establish and enforce camp rules and regulation which inter alia shall include
 - Prohibitions on hunting and poaching of wildlife, purchasing wildlife meat, fishing, gathering and harvesting medicinal or valued plants and trees, and possessing firearms, snares, traps and other hunting equipment
 - Access restrictions for non-construction personnel
 - Housecleaning and waste management requirements

- Prohibitions measures for preserving health and the dissemination of vectors and transmissible disease
- xv. Remove all built structure and facilities within the camp area upon completion of the construction project. Reinstatement of the site to the original condition and if required landscape and plantation of the site as per the instruction of IAR.

b. Equipment, Storage and Vehicle Staging Areas

The contractor shall

- i. Arrange equipment and vehicle staging area located at least 200m away from the Nile river bank in an open ground requiring only weed clearance and minimum landscaping
- ii. Barricade the staging area with appropriate means with a gate guarded by a personnel to ensure security
- iii. Maintain access to staging area at all times. Access to the staging area will be restricted to authorized construction workers and visitors with an authorized access pass only
- iv. Maintain adequate drainage facilities to avoid water logging
- v. Provision fire fighting equipments of adequate size in accessible areas with clear use instructions when required
- vi. Allocate separate areas for equipment staging, storage of construction materials, vehicle parking and repair and maintenance yards. The storage facility for hazardous waste shall be separated from other non hazardous materials and properly kept with warning sign boards and managed in accordance with the hazardous waste management.
- vii. Ensure parking of the construction and other vehicles used by the project in the designated parking lots of the staging area only
- viii. Maintain access ways and thoroughfares clear at all times in the staging area and provide traffic and parking control signage as per the central and local governments rules and regulations
- ix. Establish adequately bonded fuel dispensing and waste oil and lubricant storage facility to avoid spillage of oils and waste oils
- x. Manage the waste generated at the staging areas in accordance with the requirements of Waste Management.

- xi. Provide training to construction workers of the staging area in health and safety issues relating to the staging areas in accordance with Environmental Requirements and Training for Workers
- xii. Maintain cleanliness of the Staging Area clear of trash and debris and in neat order.
- xiii. Remove all built structure and facilities within the staging area upon completion of the construction project. Reinstatement of the site as to the original condition and if required landscape and plantation of the site as per the instruction of IAR.

II. Environmental Requirements and Training For Workers

The contractor shall

- a. Ensure all workers have completed their environmental trainings
- b. Ensure training sessions be conducted in local language All written training materials be provided in local language and English as appropriate.
- c. Maintain a training register will contain following details
 - Name of training session
 - Date of training session
 - List of attendees and signatures
 - Name of trainer
- d. Provide key messages from the training sessions in both poster and leaflet form, in local and English language. Posters be displayed prominently in construction work camps, other staging areas and construction sites
- e. Ensure the key message of the environmental training inter alia includes
 - i. Minimization of visual intrusion
 - ii. Prevention of Dust, odour, smoke, noise and vibration
 - iii. Prevention of contamination or pollution of watercourses, ground waters, drains and land
 - iv. Minimization of the impact from vehicle movements both on and off the site
 - v. Roads maintenance free from mud and debris
 - vi. Segregation of waste and disposal in accordance with the Waste Management program

- vii. storage of hazardous material in a safe and appropriate manner in the facilities provided
- viii. immediate cleaning up of the spillage and reporting to site manager
- ix. Environmental requirements to avoid impacts on the natural and cultural resources of modified KFS
- x. Respect to local culture and practice
- xi. Rules of conduct at camp and work sites
- xii. Penalty provisions in the event of breach of rules

III. Waste Management (Liquid and Solid Waste)

The contractor shall

- a. Procure and make available sufficient number of containers or similar disposal receptacles at each construction site, construction camps and construction staging areas.
- b. Maintain containers (or similar disposal receptacles) with clear marks for “Hazardous Waste” and for “Non-Hazardous Waste” for separation and sorting of waste.
- c. Ensure non-hazardous and hazardous waste be collected regularly and transported to a designated waste storage site
- d. Dispose or make arrangement for disposal of hazardous and non-hazardous waste as per the central and local governments rules and regulations
- e. Prohibit open defecation
- f. Establish fixed toilets and bathrooms in the camp staging sites with on site sanitation facilities
- g. Establish movable toilets as required at the construction sites. The grey water are brought and managed at the on-site sanitation facility of the staging camps.
- h. Dispose cement slurry and unused concretes in the designated spoil disposal sites.
- i. Prohibit disposal of construction liquid waste of any type in the Nile River
- j. Provide Environmental training to workers responsible for handling wastes at the construction sites, camps and other construction staging areas

IV. Hazardous Material Storage and Spill Management

- a. Store all fuels and oils are in a 6 m container that has a full perimeter bund 500 mm deep. The volume of the bund is in excess of 110% of the volume of the largest single container within the bund. Diesel is stored in a 2,000 L maximum storage tank within the container. Waste oil within the container is stored in a 1,000 L tank. Bunding is to be designed and constructed as per best practice guidelines.
- b. Establish areas used for storage or the use of hazardous materials (e.g., workshops, garages and storage areas) with storm water drained and collected in hydrocarbon separator basins/pits before discharge.
- c. Store Acids, coagulants and flocculants within a separate container that may comprise the water treatment facility. A similar bund is constructed around the perimeter to contain a spill if it were to take place.
- d. Store shotcrete accelerators, chemical resins and cement grouts together and be protected from the weather. The storage location will be within a safe area of the sites; as such, any spill would be easily contained and not be affected by flooding occurrence.
- e. Register all chemicals and waste considered as potentially hazardous materials in order to follow up type, quantities stored, quantities used or generated. Movements from storage and to waste disposal site will be registered. Information will be logged in a register, which will be available in each hazardous materials storage area.
- f. Maintain a register of fuel dispensed along with the records of fuel deliveries in order to reconcile the quantities used.
- g. Label the Hazardous Materials containers with
 - i. the words "Hazardous Waste"
 - ii. name of the CC user or generator
 - iii. the date of storage of the chemical, or initial date that waste accumulation began in the container
 - iv. the name of the material and its physical state (solid or liquid)
 - v. the hazard characteristics of the waste (ignitable, corrosive, toxic, reactive)
 - vi. main danger for user (poison, burning, dangerous for eyes, skin, lungs, etc)

- h. Establish safety procedures applicable to the handling and use of hazardous materials, which become a part of the training program. Safety rules will be translated in local languages and printed on posters and be posted on the walls of the dedicated areas where hazardous materials are to be used.
- i. Provide personal protective equipment to concerned workers and enforce the use of equipments
- j. Maintain all re-fuelling of heavy equipment and machinery by a service vehicle, with appropriate safeguards and protection measures to prevent any spillage or contamination by chemical wastes or maintenance oils, lubricants etc. Dedicate appropriate service to the re-fuelling of heavy equipment and machinery. Post on site safety procedures regarding fire and accidental spill management. Place “No Smoking” labels and posters wherever fuel is handled or stored.
- k. Use spill response kits to contain any ground spills that may occur as a result of servicing or through other means. The spill response kits be located at the workshop(s) where the servicing will take place and also at the re-fuelling point(s).
- l. Educate all personnel involved with re-fuelling and with the servicing of equipment with the use of the spill response kits and will be trained in the emergency procedures
- m. Cease all works in the event of a spill of any hazardous material, and the area will be cleared of all construction personnel except those involved in the clean-up activities, if necessary
- n. Establish response hierarchy in the event of a spill of any hazardous material, and be used in the development of the detailed emergency response procedures as under:
 - i. First priority is to seek medical attention for any injured personnel
 - ii. Second priority is to prevent further injury to personnel
 - iii. Third priority is to prevent environmental damage
 - iv. Fourth priority is to clean-up spill
 - v. Fifth priority is to remediate area of spill
 - vi. Sixth priority is to complete reporting requirements

- o. Apply appropriate treatment and disposal methods for the known range of hazardous materials for spills of hazardous materials by trained personnel.
- p. Display at each construction site, information on emergency response procedures, emergency contact numbers and communication and reporting procedures (to be implemented in case of an emergency situation)
- q. Post trained employee at each construction site where hazardous materials are used and where there exists a potential for a spill. Emergency response procedures and communication and reporting procedures be taken with immediate effect in case of an incident
- r. Train all construction personnel in basic emergency response procedures including communication and reporting procedures to be implemented in case of an emergency situation.
- s. Implement the following communication processes in the event of an accidental release or spill of a hazardous material,
 - i. Workers immediately notifies site manager, CR and IAR
 - ii. CR immediately notifies emergency response team
 - iii. CR immediately notifies external emergency authorities (if required)
- t. Communicate with the responsible authority as soon as possible initially be verbal, and later in writing. The communication will include the following information in relation to accidental releases or spills:
 - i. Location of spill
 - ii. Nature of material spilt
 - iii. Amount of material spilt
 - iv. Clean-up processes to be implemented
 - v. Any injuries to personnel
 - vi. Need for emergency or external assistant
 - vii. Any safety/evacuation requirements to be implemented on the construction site
- u. Submit a report to IAR and District Environmental Officer within 48 hours of the completion of a spill clean-up. The report will be used to identify any required corrective or preventive actions and emergency response procedures and training programs will be modified accordingly.

V. Vegetation Clearing

The contractor shall

- a. Prepare a plan including:
 - i. Mapped boundaries of vegetation to be cleared, including identification of which clearing will be undertaken by the NFA and which will be undertaken by the project.
 - ii. Any areas of 'sensitive vegetation' located on-site which require specific protection (e.g. vegetation adjoining drainage channels).
 - iii. Any required temporary timber storage sites for placing prior to its removal from site.
- b. Identify no clearing of vegetation outside the planed areas.
- c. Mark with temporary fencing all areas of vegetation to be cleared and the boundaries of 'sensitive vegetation' using different colours tapes
- d. Prohibit construction works, storage of materials/equipment or access by construction personnel in 'sensitive vegetation' areas
- e. Undertake vegetation clearing by a combination of manual and mechanical methods as applicable , in accordance with the following principles:
 - i. No chemical clearing methods (i.e., use of herbicides or defoliants) will be used)
 - ii. No mechanical clearing methods (i.e., bulldozers or other equipment) will be allowed within 5 m of an area of 'sensitive vegetation
 - iii. Burning will not be used as a clearing method
 - iv. Only authorized agents/persons will be permitted to cut trees.
- f. Ensure that the temporary storage sites for timber and biomass storage be designed in a stable area and protected from the risk of fire
- g. Dispose timber products that are not to be removed from site in accordance with the central and local government guidelines and the requirements
- h. Implement all vegetation clearance works in a manner that minimizes the impact on Nile River water quality and the productivity of adjoining lands

VI. Spoil Disposal and Management

The contractor shall

- a. Develop the spoil placement area in accordance with the following requirements in consultation and consent of IAR and District Environmental Officer:
 - i. Constructed with smooth slopes and free draining patterns
 - ii. Located in existing cleared areas and above the flood level, where practical
 - iii. Stockpiles will be located as far as practical from any watercourse.
 - iv. Located on land with a gradient of < 10%
 - v. Height will not exceed 6 m and a 2 m berm will be provided at a height of approximately 3 m, and batter slopes will not exceed 1.5:1. This requirement may be re-evaluated considering the nature of the material.
 - vi. Temporary seeding of stockpiles will be undertaken until the permanent re-vegetation is established.
 - vii. In windy conditions, watering of stockpiles will be carried out if excessive dust generation is evident.
 - viii. Diversion banks will be constructed uphill of stockpiles where there is a potential for run-off to erode the base of the stockpile.
 - ix. Silt fences will be constructed downstream of stockpiles to control runoff.
 - x. Spoil placement will not be located in identified floodway's or flood storage areas
- b. Place all spoil from the construction works within the general boundaries of the spoil disposal area as identified in the relevant site specific plans. Spoil placement in other areas will not be permitted
- c. Complete the detailed engineering design works prior to any placement of spoil. The design will provide details of the staged development of the spoil disposal area and will include details on the final landform to be achieved. The design will incorporate the following principles:

- i. Spoil placement activities will be contained within designated boundaries
 - ii. Natural drainage patterns will be avoided where possible
 - iii. Where natural drainage lines are affected, they will be reinstated following completion of the spoil placement
 - iv. The final landform will be compatible with the existing and surrounding landforms and designed to minimize visual pollution
- d. Prepare erosion and sediment control measures prior to the placement of any spoil
 - e. Mark the boundaries of the spoil disposal area with temporary fencing or similar
 - f. Comply measures for onsite traffic and assess management for Vehicles transporting spoil to the spoil disposal area.
 - g. Comply with dust control measures at the spoil disposal sites

VI. Erosion and Sediment Control Management

The contractor shall

- a. Prepare Erosion and Sediment Control Design Plans prior to the commencement of works which will contain the following in greater detail:
 - i. Conceptual design of erosion and sediment controls to be implemented on-site
 - ii. Environmental Management and Monitoring Plan prepared for each site designed for erosion and sediment control
- b. Implement the erosion and sediment control works prior to the commencement of any construction works which may cause soil disturbance the site.
- c. Minimize the extent of areas to be cleared as far as deemed practical
- d. Maximize the use of existing cleared areas
- e. Retain the areas not required to be in their original condition
- f. Define sensitive erosion areas' as under:
 - i. Areas with slopes > 30%
 - ii. Areas within 30 m of a bank of a natural watercourse

- iii. Cut and fill slopes in areas of slope instability or erodible geology

- g. Minimize work sites in sensitive erosion areas
- h. Restrict works where possible, in sensitive erosion areas to the dry season
- i. Undertake clearing of sites in the same sequence as the initiation of construction sites in order to minimize disturbances
- j. Establish temporary topsoil stockpiles in accordance with the following:
 - i. Stockpiles will be constructed with smooth slopes and free draining patterns.
 - ii. Stockpiles will be located in existing cleared areas.
 - iii. Stockpiles will be located at least 50 m from any watercourse or drainage line and not located in identified floodway's.
 - iv. Stockpiles will be deeply ripped to provide for moisture retention and re-growth.
 - v. Stockpiles will be located on land with a gradient of < 20%
 - vi. Stockpile height should not exceed 3 m and batter slopes will not exceed 1.5:1. The criteria may be evaluated considering the nature of the material.
 - vii. In windy conditions, watering of stockpiles will be carried out if excessive dust generation is evident.
 - viii. Diversion banks will be constructed uphill of stockpiles where there is a potential for run-off to erode the base of the stockpile.
 - ix. Silt fences will be installed in between the stream and the stockpile to control runoff where necessary.

- k. Remove Topsoil soil from the site and pile and save for the use of re-vegetation and eco-restoration activities
- l. Manage long term top soil placement sites in accordance with the requirements of Spoil Disposal and Management
- m. Design all erosion and sediment controls to cater for a minimum of a 2 years return event floods
- n. Maximize retention and preservation of existing vegetation along watercourses to reduce flow velocities and act as a sediment filter
- o. Divert 'Clean' runoff from undisturbed areas away from the construction site and into established watercourses

- p. Direct runoff from disturbed areas into sediment trapping or filtering devices.
- q. Construct and regularly maintain sediment trapping or filtering devices (sediment fences, sediment basins or traps) of appropriate size to capture and treat sediment laden runoff from all disturbed areas.
- r. Pass all discharge from sediment collection devices through a vegetative or silt filter, prior to release to an established watercourse.
- s. Inspect all erosion and sediment controls visually at least once a week during the dry season and every 24 hours during the wet season to ensure their ongoing effectiveness. undertake any required remediation or replacement works within 24 hours of detection.
- t. Review effectiveness and adequacy of the existing erosion and sediment controls at least one month prior to the anticipated commencement of the wet season. Undertake any necessary modification and/or augmentation of controls if found defective.
- u. Undertake temporary stabilization of exposed surfaces if construction works are temporarily stopped in an exposed area (for longer than 30 days).
- v. Limit access to and within construction sites to designated access roads and internal haul roads.

VII. **Traffic And Access Management**

The contractor shall

- a. Signpost all roads within the construction area the following information in local language and English:
 - i. Speed limit
 - ii. Any applicable load limit
 - iii. Road features that may affect driving conditions (i.e., crests, hidden accesses, etc.)
 - iv. Identification of road
 - v. Direction to construction areas
- b. Install traffic speed regulation devices, such as speed humps, and signage at sensitive locations including in the vicinity of villages, construction camps and at busy intersections.

- c. Implement a maintenance program for the construction vehicle fleet which will include consideration of the following issues:
 - i. General condition and safety of vehicles
 - ii. Check of vehicle brakes and tires
 - iii. Vehicle exhaust emissions
 - iv. Vehicle noise emissions and noise control measures
- d. Inspect or make arrangement for inspection all construction vehicle fleet at least every 6 months and obtain a written certificate from a qualified mechanic as to its fitness for service
- e. Carryout visual inspection of traffic movements within the construction area. If there is evidence that traffic congestion is occurring on the roads, take appropriate management measures.
- f. Ensure parking and movement of construction vehicles and traffic on-site are confined to the designated access road network. Prohibit movement and parking of vehicles outside the designated access road network and parking lot.
- g. Notify IAR and District Environmental Officer prior to the movement of special loads on public roads, including hazardous materials or large items of construction equipment. Implement all reasonable and practical measures required by the IAR to ensure that the risk of harm to the community and environment is minimized during transportation of special loads.
- h. Mark safety fencing and appropriate warning signs in local language and English at Construction activities sites that use public and internal roads
- i. Control access to the construction site to ensure site security
- j. Sensitize the construction workers on safety issues and regulations regarding traffic and site access during training to workers
- k. Utilize construction spoil if possible in the earthen roads

VIII. Dust and Emission Control

The contractor shall

- a. Ensure all vehicle movements be confined to designated access routes and haul roads.

- b. Carryout management of short term and long term material stockpiles in accordance with the requirements of Erosion and Sediment Control management
- c. Implement watering of exposed surfaces in the following situations:
 - i. During windy conditions
 - ii. When visual inspection indicates excessive dust generation
 - iii. When dust generating activities are being carried out within 100 m of a village or construction work camp
 - iv. During period of heavy traffic use on unsealed haul roads
 - v. In response to complaints by external parties
- d. Implement maintenance program for the construction vehicle fleet which will include consideration of the following issues:
 - i. General condition and safety of vehicles
 - ii. Check of vehicle brakes and tires
 - iii. Vehicle exhaust emissions (no visible fumes for > 10 seconds)
 - iv. Vehicle noise emissions
- e. Inspect construction vehicle in the fleet at least every 6 months to ensure its fitness for service
- f. Burn waste materials which are non-hazardous under the following conditions:
 - i. Burning will only be undertaken in the presence of a trained fire protection officer.
 - ii. Prior to any burning, the IAR and District Environmental Officer will be notified.
 - iii. Burning will not be undertaken during severe wind conditions
 - iv. Appropriate fire protection equipment will be available on-site during the burn.
 - v. Burning will be undertaken at a safe distance from vegetated areas.
 - vi. Burning will not be undertaken within 1 km of a village.
 - vii. Following completion of the burn, the trained fire protection officer will inspect and certify that the fire has been extinguished

- g. Implement measures to reduce odor from the waste disposal area in accordance with the requirements of Waste Management

IX. Noise Control

The contractor shall

- a. Select the quietest vehicles and/or equipment suitable for use for the construction activities.
- b. Maintain all equipment and vehicles in good mechanical condition and be fitted with appropriate silencers, mufflers or acoustic covers
- c. Regularly inspect or make arrangements for inspection all construction equipment and vehicles to check noise emissions and noise control equipment
- d. Site stationary noise sources as far as possible from villages, construction camps and settlement areas.
- e. Make use of topographic features to provide shielding between stationary noise sources and villages and construction camps
- f. Providing hearing protection for all construction personnel working in the vicinity of noisy construction activities (defined as those activities generating noise levels greater than 80 dB(A).
- g. Ensure no construction worker be exposed to noise levels of 80dB(A) or above for more than 8 hours within any 24 hour period
- h. Carry out general construction works within a distance of 1km from villages or construction camps will be carried out between 06.00 and 18.00. Construction in all other areas may be undertaken 24 hours a day subject to suitable safety and lighting measures being implemented.
- i. Undertake blasting activities within a distance of 2 km from villages or construction camps only between 06.00 and 18.00. Residents adjoining the blasting site be provided with at least 24 hours notice that blasting is to take place and given information on the likely timing and number of blasts.
- j. Restrict movement of vehicles to and from the construction site and within the construction site through unauthorized road corridor.

X. Project Personnel Health Program

The contractor shall

- a. Prepare the “Health and Safety Manual” local language and in English and distribute it to the workers during the Environmental requirements and safety trainings. The manual beside other shall include following information on health and safety.

Health

- i. Anti malaria precautions
- ii. Precautions for HIV / AIDS and other venereal diseases
- iii. Diarrheal precautions
- iv. Symptoms of other diseases typical of the area (such as dengue fever)
- v. Recommendations regarding proper disposal of all wastes
- vi. Use of proper drinking water
- vii. Use of appropriate toilets

Safety

- i. Use of Personal Protective Equipment (PPE) as required by the nature work which includes head protection, foot protection, hand protection, eye protection, lung protection, ear protection, protection against fall, electrical currents etc.
 - ii. Use of appropriate clothing
 - iii. Use of appropriate ladders
 - iv. Use of appropriate slinging
 - v. Attention to signals of danger
 - vi. Attention to suspended weights
 - vii. Attention to unprotected pits
 - viii. Attention to buried cables
 - ix. Attention to overhead power cables
 - x. Attention to all flammable items
 - xi. Procedure for fire extinguishing
 - xii. Miscellaneous safety issues
- b. Train and assign First aid teams in groups of two to three persons to the different working sites
 - c. Establish medical facilities (including items such as First Aid kits and bedding for patients) and ensure presence of medical personal at all time at the project staging area

- d. Take action and response in the event of a spill of any hazardous material according Hazardous material storage and spill management procedures
- e. Carryout vector control of mosquitoes and other pests through following actions:
 - i. Effective storm water drainage systems implemented to avoid stagnant water
 - ii. Storm water drains and borrow pits will be kept free of vegetation
 - iii. Minimizing the presence stagnant water within containers and other pools of water
 - iv. Removal of discarded items that could contain water (see iii above
 - v. Providing mosquito nets to workers
 - vi. Safe application of pesticides when necessary
- f. Adequately manage solid waste that might attract pests such as domestic rubbish and food waste
- g. Regularly monitor and maintain the water supply and sewage system, especially in camp sites, and in other project staging sites to minimize the pests.

XI. Cultural Resources and Chance Find Procedures

The contractor shall

- a. Undertake construction activities in such a manner as to avoid any physical effect on known sites of cultural or religious significance. Physical cultural resources will be defined as
 - i. remains left by previous human inhabitants (e.g., tangible and intangible shrines, artefacts' etc.)
 - ii. unique natural environmental features
- b. Undertake the following procedures when the construction workers or site manger reports unexpected discovery of historical remains, antiquity or any other object of cultural or archaeological importance from the construction site :
 - i. Stop construction activities.
 - ii. Delineate the discovered site area.

- iii. Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard shall be posted until the responsible authority takes over.
- iv. Notify the IAR and District Environmental Officer, who in turn should notify the responsible authorities, Department of Museums and Monuments and local authorities (within less than 24 hours) and till the responsible authorities undertake the following.
 - Responsible authorities take charge of protecting and preserving the site before deciding on the proper procedures to be carried out.
 - An evaluation of the finding will be performed by the Department of Museums and Monuments. The significance and importance of the findings will be assessed according to various criteria relevant to cultural heritage including aesthetic, historic, scientific or research, social and economic values.
 - Decision on how to handle the finding will be reached based on the above assessment and could include changes in the project layout (in case of finding an irrevocable remain of cultural or archaeological importance), conservation, preservation, restoration or salvage.
 - Implementation of the authority decision concerning the management of the finding.
- c. Resume construction work only when permission is given from the Department of Museums and Monuments after the decision concerning the safeguard of the heritage is fully executed.
- d. Apply for time extension for delays caused due to chance find of cultural objects

XII. General Good Practice Safety Rules & Requirements for Workers

Workers shall

- a. Display employee badge upon entry to the site.
- b. Not work at any time when their ability is or may be impaired as a result of the use of alcohol, illegal drugs or legal prescription drugs.

- c. Be seated in moving vehicles and wear seat belts, if available, while the vehicle is in motion.
- d. Not take part in fighting, horseplay or gambling, possess firearms or other weapons, possess or use alcohol or illegal or unauthorized drugs or smoke on public area, except in “Designated Smoking Areas”.
- e. Eat and drink only in permitted, designated areas.
- f. Inspect all tools and equipment prior to use. Unsafe tools and equipment shall not be used.
- g. Perform work in such a manner as to assure at all times maximum safety to self, fellow workers, and the public and in accordance with all regulatory requirements.
- h. Not attempt to perform work if they do not feel qualified or physically able.
- i. Perform work according to proper EHS practices and procedures as posted, instructed and prescribed.
- j. Obtain specific instructions and/or clarifications from their supervisor before proceeding with work in situations where an environmental safety requirement or procedure is not completely understood.
- k. Observe and adhere to all warning signs, signals, and notices.
- l. Not be permitted to wear loose or flapping clothing or have rags or other objects extending from pockets or belts when in the immediate proximity of machinery, motors, engines, or rotating equipment.
- m. Not use facility tools, moving equipment, or stock room supplies without prior approval from the Project Coordinator.
- n. Never operate any machine or rotating equipment unless all guards and safety devices are in place and in proper operating condition.
- o. Remain in the general area of their assigned work and not enter other areas, unless authorized.
- p. Be disciplined for any blatant disregard or repeated violations of health and safety rules.