

**Office of the Prime Minister, in  
partnership with United Nations High  
Commission for Refugees (UNHCR)**

**ENVIRONMENTAL AND SOCIAL IMPACT  
STATEMENT FOR THE RWAMWANJA  
REFUGEE SETTLEMENT, KAMWENGE  
DISTRICT**

Prepared by

International Union for Conservation of Nature (IUCN) in  
Association with United Nations Environment Programme  
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## LIST OF ACRONYMS

AAHI	-	Action Africa Help International
ADRA	-	Adventist Development and Relief Agency
ADF	-	Allied Democratic Forces
AfDB	-	African Development Bank
AIDS	-	Acquired Immune Deficiency Syndrome
ARAP	-	Abbreviated Resettlement Action Plan
APP	-	Air Pollution Potential
CFR	-	Central Forest Reserve/s
CBD	-	Convention on Biological Diversity
CAO	-	Chef Administrative Officers
CoA	-	Certificate of Approval
CDM	-	Clean Development Mechanism
DEO	-	District Environment Officers
DRC	-	Democratic Republic of Congo
DWRM	-	Directorate of Water Resources Management
EIA	-	Environment Impact Assessment
ESIA	-	Environmental and Social Impact Assessment
ESMMP	-	Environment Social Management and Monitoring Plan
FAO	-	Food and Agriculture Organisation
GoU	-	Government of Uganda
HIV	-	Human Immune Virus
IDP	-	Internally Displaced People
IOM	-	International Organisation for Migration
IUCN	-	International Union for the Conservation of Nature
KGR	-	Katonga Game Reserve
LOU	-	Laws of Uganda
LC	-	Local Council
LWF	-	Lutheran World Federation
MSF	-	Médecins sans Frontiers
MLHUD	-	Ministry of Lands, Housing and Urban Development
MWE	-	Ministry of Water and Environment
MAAIF	-	Ministry of Agriculture, Animal Industry and Fisheries
MTN	-	Mobile Telephone Network
NEMA	-	National Environment Management Authority
NWP	-	National Water Policy
NFTP	-	National Forest and Tree Planting
NFA	-	National Forestry Authority
NGO	-	Non Governmental Organization
OP	-	Operational Policy
OPM	-	Office of the Prime Minister
PCR	-	Physical Cultural Resources
RAP	-	Resettlement Action Plan

RPF	-	Rwandese Patriotic Front
RS	-	Rwamwanja Settlement
RGC	-	Rural Growth Centre
SC	-	Sub County
STD	-	Sexually Transmitted Diseases
ToR	-	Terms of Reference
TC	-	Town Council
UBOS	-	Uganda Bureau of Statistics
UWA	-	Uganda wildlife Authority
ULC	-	Uganda Land Commission
UNEP	-	United nations Environment Project
UNESCO	-	United nations Educational, Social and Cultural Organization
UNFCCC	-	United Nations Framework Convention on Climate Change
UNHCR	-	United Nations High Commissioner for Refugees
VC	-	Ventilation Co-efficient
WFP	-	World Food program

**Measures and units:**

Km:	Kilometre (= 1 000 metres)
M:	Meters

## **Executive Summary**

### **o.1 Introduction**

The Rwamwanja site was one of the old refugee settlements which were selected by the Government of Uganda in the early 1960's to accommodate refugees. From that time it was used by the Rwandan refugees until 1994 when most of them left and returned to Rwanda following the liberation of their Country Rwanda leading to its being reoccupied by the nationals after 1994. By 1994 however, the Settlement had a good number of Ugandan nationals. Following their departure in 1994, more Ugandans moved into the Settlement some of whom directly bought from the outgoing Rwandese, while others just moved and occupied what was seemingly free land on prompting from some of the local leaders in the surrounding districts.

Although no data was provided to the ESIA team, the Local Council 5 Chairman (Kamwenge District) estimated that the nationals who owned land were about 10,000 while including the workers the number could have been up to 20,000. This could not be independently confirmed.

On 17<sup>th</sup> April 2012, the Uganda Government re-opened the Rwamwanja Settlement (RS), for use by the Congolese refugees who were fleeing their country due to the ongoing conflicts there.

The opening of the Settlement was not welcomed by the indigenous settlers and there was a lot of resistance and violence which led Government into using forceful eviction of some nationals (some Nationals still remained and the UNHCR estimates that there up to 14,000 nationals still within the Settlement).

Rwamwanja Settlement covers approximately 41.9mi<sup>2</sup> (108.52km<sup>2</sup>) and is located within Nkoma and Bwizi Sub-Counties of Kamwenge district, about 45kms from Kyenjojo town along Kyenjojo – Kamwenge road. As at 21st August 2012, Rwamwanja had 21,208 refugees which had grown to 28,287 by 16th November 2012 and increasing.

Some of the stakeholders have suggested a maximum planning figure of 50,000 persons for the Settlement. However, the carrying capacity of the RS is not yet determined.

The Principal Caretaker of the Settlement is the Office of the Prime Minister (OPM). The OPM through the Department of Disaster Preparedness is

mandated to coordinate emergency situations including the handling of refugees. OPM and the United Nations High Commission for Refugees (UNHCR) in consultation with the International Union for the Conservation of Nature (IUCN) have taken the initiative to conduct an Environment and Social Impact Assessment (ESIA) for Rwamwanja Refugee Settlement Project.

## **o.2 Purpose of the ESIA**

Under schedule III of the National Environment Act, the Rwamwanja Refugee Settlement project qualifies for a full environmental impact assessment. This is because the scoping exercise revealed that the refugee Settlement is likely to lead to considerable land degradation including deforestation, stress on Water resources, disturbance to the Katonga Game Reserve (KGR) and overpopulation among others all of which could lead to significant impacts on both the local and regional environment. The main purpose of the ESIA therefore is to assess both, negative and positive impacts of the RS on the overall environment within Rwamwanja and its surroundings with a view to ensuring that the Refugee Settlement Project will comply with the provisions of the National Environment Act Cap 153, 1995 as well as with the other National Policies, Laws and Regulations.

To conduct the ESIA, the methodology included the following: -

- Site Examinations covering the Social, Physical and Biological Environment;
- Stakeholder consultations;
- Field Inspections;
- Literature Review covering various aspects of the environment;
- GIS-Mapping and Land use mapping with use of Google earth Satellite Imagery;
- Vegetation mapping and indexing and among others;
- Floristic Surveys; and among others
- Statistical analysis of questionnaire inputs

## **o.3 Objectives of the Refugee Settlement Project**

The broad objectives at the National level are: -

- To provide protection to a refugee or displaced person from either a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social or political group, or a political opinion;
- To ensure that the dignity of the displaced person / refugee is respected and provide a new livelihood for refugees through Resettlement;

The specific objectives include the following: -

- *Through Resettlement*, to provide international protection and meet the specific needs of individual refugees whose life, liberty, safety, health or other fundamental rights are at risk in their home country.
- *Through Resettlement*, provide a durable solution for larger numbers or groups of refugees, alongside the other durable solutions of voluntary repatriation and local integration.
- *To enable Uganda* to express international solidarity and responsibility by sharing responsibility for refugee protection, and reducing problems impacting the national communities in Uganda (as a country of asylum).

#### **0.4 Policy, Legal and Institutional Framework**

The Rwamwanja Settlement is a large project considering that it covers almost 50 square miles and it may hold a refugee population in excess of 60,000 people. Under schedule III of the national environment Act, this project qualifies for a full environmental impact assessment. The study recognises the deliberate National Policy and Legal Framework that ensures that the settlement is developed in line with the law and is sustainable in the long term. The study also recognises the different International Agreements which are relevant to supporting the National efforts in environmental management including the welfare of communities. These too are relevant to the Settlement project provided they support or are in consonance with the applicable Laws and Regulations in Uganda. In implementing the refugee settlements, the Uganda Government has worked closely with a number of development partners including, the UNHCR, UNEP, UNICEF and WFP among other.

#### **0.5 Activities and Operation of the Settlement**

There are at least four phases of the Settlement exercise including:

- Reception and registration of refugees
- Temporary Settlement in transit camps/sites
- Allocation of plots of land;
- Settling in and access to various social facilities;

However, the main objective of the Settlement is to settle refugees and offer them sustainable livelihood. The main livelihood activities therefore include:

- Agricultural activities (e.g, agro-forestry projects for food security purposes);
- Provision of health and educational services
- Provision of Water and sanitation services (e.g. borehole construction and other forms of water supply);

- Construction of roads within the Settlement (access roads as well as maintenance and widening of existing roads)
- Ensure a sustainable waste management strategy;
- Support afforestation measures for security of wood supply for fuel and other uses;
- Any other activity that will help to improve the livelihood of the settlers.

On arrival refugees are given a plastic sheeting to construct some temporary shelter and later permanent shelter out of poles mud and wattle/reeds with grass thatched roofs. This type of shelter construction is approximately 60% biomass. Each refugee household arriving at Rwamwanja receives 0.5 hectares (50m x 100m) of agricultural land within the Settlement area in addition to providing them with adequate quantities of food in the initial stages of their settlement. The families are provided a full ration for the first three years. This is reduced to 60% of the full ration during the 5<sup>th</sup> and 6<sup>th</sup> year of settlement. After this they are provided with 50% of the full ration. These measures ensure that the refugees will have a relatively comfortable living within the Rwamwanja Settlement

#### **o.6 Environment in a humanitarian context of mass population displacement**

UNHCR, established in 1950, has a long experience in dealing with population displacement all over the world and since the eighties of the last century UNHCR tried to tackle the manifold environmental issues related to humanitarian crises in a varying socio-economic, cultural and environmental context. The challenge has always been on how to address appropriately and in a timely manner environmental issues in humanitarian crisis.

Indeed many decisions made in camp and settlement management during the emergency phase have an environmental component which may lead to long lasting impacts on the ecosystems of the site and its surroundings and thereby on the livelihoods of the host community (see UNEP 2006). Nearby national heritages may be affected adversely as well. To reduce rehabilitation costs it is imperative that environmental issues are addressed in a timely and comprehensive manner in order to avoid long-lasting impacts on the ecosystems and the livelihoods of the host communities. It is for this reason that both communities should be closely involved from the very beginning in the elaboration of an environmental management plan and its implementation.

#### **o.7 Existing Environmental and Social Economic Conditions of the Project Area**

Rwamwanja Settlement is situated in Nkoma and Bwizi Sub counties and borders with Katonga Game Reserve within Kamwenge district. Kamwenge District shares boarders with the Districts of Kyenjojo in the East, Kabarole in the West, Kibale and Kyenjojo in the North and Mbarara in the South.

The project area is within hilly terrain with many small but seasonal wetlands. It is mostly an agricultural country with limited or no industrial activities. The general area is of low-sensitivity environmental settings (slopes are all less than 30%, and most of the flora and fauna are not endangered). The settlements are scattered. The soils are deep organic hydromorphic soils with an average slope of less than 5%. On the steeper slopes (30% or more) the soil type is Leptosol according to the FAO classification.

For Rwamwanja, the drainage system / small streams lead into the Katonga River which eventually drains into Lake Victoria. Katonga River is surrounded by an extensive wetland choked with papyrus which is also the boundary to the eastern side of the Rwamwanja Settlement. Within Rwamwanja, there are mostly seasonal swamps and rivers as the area is water stressed.

There are no major hazardous materials envisaged in this project. However, an analysis of the lighting habits for the refugee community, showed that over 80% of them use torches for lighting which leads to a large number of batteries. These batteries are part of the hazardous waste that will need to be handled accordingly. In addition to medical waste, the other potential hazardous waste may arise in the future due to use of chemical fertilizers.

## **0.7 Biological Environment**

Rwamwanja Settlement borders with Katonga Game Reserve that measures approximately 211 km<sup>2</sup> (81 sq mi) of savanna, acacia woodlands and a large area of wetlands ( Katonga Primary ecosystem) and is located along the banks of the river Katonga. The reserve protects a network of forest-fringed wetlands along the Katonga River and is home to over forty (40) species of mammals and over one hundred (150) species of birds many of which are specific to wetland habitats. Commonly sighted in the wetland reserve are bohor reedbuck, bushbuck, waterbuck, warthog, as well as elephant, buffaloes, river otters and colobus monkeys. Also found in this habitat is the shy Sitatunga, a semi-aquatic antelope that lives exclusively in swamp areas.

Otherwise the Settlement is located in a typical savanna landscape on undulating terrain with mostly smooth hills separated by small valleys. The savanna type is a transition from dry to moist savanna (see Langdale-Brown et al. 1964). Tree and shrub cover varies mainly according to soil moisture content and slope angle. Small seasonal ponds and Riverine forests alternate along the valley bottom while Tree savannas and savanna woodlands on varying slope, interspersed with small semi-deciduous thicket clumps, cover most of Rwamwanja. Some of the hilltops have rocky outcrops with open shrub savannas. However, most of this natural vegetation is being cleared for Settlement, agriculture, firewood, charcoal and building

materials. In area coverage for different vegetation types within Rwamwanja is shown in Table 0.1 below:

**Table 0.1:** Area coverage for different vegetation types within Rwamwanja Settlement

VEGETATION TYPE	AREA (ha)	AREA (km <sup>2</sup> )	Percentage
Savanna woodland	3,333.77	33.34	42.25%
Tree savanna	2,968.08	29.68	37.62%
Shrub savanna on hilltops	93.36	0.93	1.18%
Riverine forests	1,084.90	10.85	13.75%
Wetland	409.75	4.10	5.19%
<b>TOTAL</b>	<b>7,889.85</b>	<b>78.90</b>	<b>100.00%</b>

So far all the refugees who have arrived at the Settlement are cultivators and by allocation of land, they are encouraged to continue with their agricultural activities. UNHCR together with other implementing partners like ADRA distributes crop seeds, agricultural equipment and pesticides and ensure support services all to benefit the Settlement Agriculture.

Very few domestic animals have been noticed during the field survey within the settlement area, but it is likely that after the first harvest, the refugees will invest in buying livestock as an important form of social security. At the time of the survey no information was available about possible future programs of implementing partners, which aim to distribute or promote livestock to the refugees.

Numerous small seasonal water ponds occur within the area. Continuous wetland occurs along the stream bordering Katonga Game Reserve **while** the wetlands bordering the Settlement such as the Katonga tributary are composed mainly of papyrus (*Cyperus papyrus*) and several sedges and of many perennial forbs tolerating strongly alternating soil moisture content.

## 0.8 Social Concerns

It is imperative that the Settlement operates within the established Local Government Units (at both Districts Headquarters and Sub county levels) within the project area to ensure smooth operations and a sense of acceptance of the refugees by both the host community and the Local Governments. Although this process has already been initiated by the EIA team through briefing sessions as well as consultations to some of the key stakeholders, evidence on the ground shows that there is still more to do to improve the relationship between the Refugee Settlement and the Kamwenge District Headquarters. The Deputy Chief Administrative Officer for Kamwenge district feels that the district management is not well briefed about the happenings at the refugee Settlement.

**Population:** - The Population and Housing statistics provide a reasonable estimate for the population figures within Kamwenge up to the year 2012. However the figures for Nkoma and Bwizi Sub counties are likely to be an underestimate due to the arrival of large numbers of refugees during the year 2012. Otherwise for the different Sub counties and parishes together with their populations it was estimated that the affected population within the directly affected Sub Counties would by 2012 be 72,500 having grown from an estimated 66,500 in 2008. Out of the 2012 population of 72,500 people, 35,400 are females while 37,700 are men. It is important to note however that since April 2012, almost 30,000 refugees have come in to Nkoma and Bwizi Sub Counties.

The dominant ethnic compositions in Kamwenge district are the indigenous Batagwenda and Batoro as well as the newly settled Bakiga, Bahima, and Banyankore. Today the refugees who came in April 2012 are all Congolese but of mixed ethnicities. The majority are Congolese of Rwandese origin (mostly Hutu and a few Tutsi Congolese).

Health and Morbidity: -

Kamwenge District does not have a single referral hospital and the highest levels of healthcare provider are two health centre IVs. Within the Settlement, there is only one health centre III which is congested catering for up to about 60,000 people (taking into account both the refugee population as well as the host community).

Consultations have indicated that the death rate among children within the Settlement is high with up to three children dying daily. The reproduction rate is also high. The most common causes of death among the children include the following: -

- Malaria
- Dysentery
- Respiratory Tract infections
- Malnourishment

The project area is generally water stressed with almost no water during the dry season. At the time of conducting the ESIA however, there was an estimated population of refugees of 28,287 by 16<sup>th</sup> November 2012 served by 38 boreholes that are functional. In addition, 16 more are planned to be dug. The average depth of the boreholes is around 40-50 meters ranging between 30 and 100 meters and their average yield is approximately of 1.5 m<sup>3</sup> per hour. These boreholes are currently used by both refugees and the local population. The Functional boreholes were constructed in such a way that the longest distance from a settler to the water source is at maximum 1 km. On the other hand, some people continue to use unsafe water from ponds / pools within some of the valleys in the area

Human Settlements, including poor location of latrines, being located too close to open streams or over unconfined aquifers can cause a contamination of water resources. On the other hand, the sanitation situation is in a poor status. Many of the refugees are just about to construct pit latrines and majority do not seem to have any.

**Education:** - The number of school going children is overwhelming considering that 60% of the population is composed of children. Currently there are only two schools within the Settlement one of which is fully operational (Rwamwanja Primary School) while the second one is registering potential pupils (St Michael's Primary School). The population in each of these schools is over 2000 pupils and it is clear that the schools are oversubscribed. In addition the UNICEF, World Vision and OXFAM have put in place several child care centres which at the time of the survey looked under utilized.

**Settlements:** - In general, the Settlement patterns within the Settlement are controlled such that a refugee is provided a small plot of 100 by 50 metres in size (0.5 of a hectare). Housing for refugees starts with a small reed hut covered with either a plastic sheet or tarpaulin. Then it graduates to a small single mud and wattle/reed house. There are also some indigenous communities which have been left within the Settlement (those that were not evicted). Their households are mostly semi permanent with iron sheet roofing. There are also a few permanent structures especially in the (RGCs)

**Economic Activities:** - The dominant economic activity within Kamwenge District is subsistence agriculture. Within the Settlement, all the refugees are cultivators. Within the surrounding parishes, mixed agriculture is practiced with some people practicing livestock rearing, while others do agriculture. The refugees have started to sell some of their products and a few are selling some of the relief items as seen from the weekly market.

**Energy:** - The main power source for domestic needs in the Settlement and its surrounding is Firewood for cooking. Within the project area, kerosene/paraffin and Firewood continue to be the main source of energy for lighting for most households. There were a few homesteads both within and outside of the Settlement which had solar panels mostly for lighting and charging phones.

With specific reference to lighting, there is a major difference between the host community and the refugee community. Almost overwhelmingly the refugee community uses firewood even for lighting with most of them (82.4%) using torches in addition. While the use of Firewood will contribute to depletion of the forest estate, the use of torches will tend to lead to dumping of torch batteries within the environment with negative consequences.

Referring to the refugee community, multiple challenges are associated with the collection, supply and use of fuel for cooking, lighting and heating purposes for the most vulnerable in humanitarian, transitions and development settings. Without safe and dignified access to cooking fuel, not only beneficiaries cannot cook the food they receive, but they may be forced to resort to negative coping mechanisms such as selling or bartering food for fuel, undercooking to save on fuel or venturing in unsafe places to gather wood.

The firewood demand, primarily for cooking, but also for heating water (hygiene) and for lighting is permanently continuous and its impact on the vegetation will be progressively manifested with time. The firewood consumption of the inhabitants of Rwamwanja is expected to be initially relatively high due to the readily available firewood in the vicinity.

The potential for deforestation is quite high due to the demand for firewood and charcoal. As a result of the recent drastic rise in charcoal prices in Kampala the production of charcoal has become very lucrative for many entrepreneurs in the rural areas of Uganda. Due to lack of other income generating activities the production of charcoal is very attractive for many Congolese refugees although its production is forbidden within Rwamwanja by OPM.

As a way of halting deforestation, OPM has started to mark trees with different colours in order to guide the refugee community on how to utilise the tree/wood resources and subsequently reduce the deforestation within Rwamwanja and to also protect socio-economic and ecologically important trees.

**Poaching of Wildlife:** - A comparative analysis of the eating habits has shown that the Congolese are more inclined to eating of bush meat if compared to the host community. Other eating habits of the Congolese include eating of wild birds, a

practice not common among the host community. Such practices have serious implications regarding the possible poaching / hunting within the protected areas.

**NGOs and CBOs in the Area :** - Kamwenge District area in general and the Rwamwanja Settlement in particular has a number of implementing partners many of whom are NGOs. They provide a wide range of services within Settlement and are mostly targeting the delivery of minimum health care packages. The following implementing partners were known to be within the Settlement.

- OXFAM
- UNICEF
- World Vision (WV)
- Adventist Development and Relief Agency (ADRA)
- Action Africa Help International (AAHI)
- Lutheran World Federation (LWF)
- International Organisation for Migration (IOM)

Most of these implementing partners are only there at the height of the emergency to support the Settlement efforts.

#### **o.8 Analysis of Alternatives**

At the time of conducting this Environmental and Social Impact Assessment, the Office of the Prime Minister and the United Nations High Commissioner for Refugees (OPM/UNHCR) had already taken the decision (in April 2012) to host the Congolese refugees in Rwamwanja Settlement thereby limiting the number of alternatives available. Otherwise the potential alternatives include the following: -

- Settlement approach to handling refugees which is the **Alternative A;**
- The camp policy approach which is the **Alternative B;**
- Denying the Refugees entry into Uganda which would be **Alternative C;** and
- The do nothing Alternative which is the **Alternative D;**

Having considered the circumstances and noting that the Uganda Government has already decided to implement alternative A, this study has therefore been conducted on the basis of **Alternative A.**

#### **o.9 Description of significant Environmental Impacts and proposed mitigation measures**

The study has identified both negative and positive impacts. The study notes that that the Settlement could greatly impact mainly on the natural resources

management, the sensitive ecological areas within Rwamwanja and the Katonga Game Reserve.

The positive impacts include: -

- Passing on to the host community up to 30% of the services and benefits that are intended for the refugee community which includes Water and Sanitation facilities, health facilities, and potential for jobs within the settlement;
- Increased produce in local markets due to production from the refugee community;
- Potential for increased labour sources in the region (work force);

On the other hand, the key concerns include the following: -

- The High number of refugees (28,287 by 16<sup>th</sup> November 2012) the majority of whom are youths and children;
- Potential for destruction of Trees reducing carbon sinks, leading to deforestation, and land degradation;
- Generation of waste (both hazardous and non hazardous) within the RS;
- Agricultural activities in fragile ecosystems (such as wetlands, Riverine forests, hilly slopes) leading to land degradation and soil erosion;
- Likelihood of crossing into the KGR for poaching / hunting leading to disturbance of the threatened wildlife in the area;
- Charcoal harvesting in Riverine forests;
- High population beyond the capacity of the present facilities (Health, Schools and water points among others) in the RS;
- The random and undocumented movements of those nationals who used to occupy the area before 17 April 2012;
- Potential for polluting water sources and soils;
- Construction impacts in respect of base camp and other developments;

In view of the above, a number of mitigation measures have been proposed. Table 02 below provides a summary of the anticipated impacts, their level of significance, and potential mitigation measures. The threats with the highest risks have been highlighted in **RED!**

Table 0.2: Summary of Risk Categorisation for the Identified Threats

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
Climate Change	Likely	Moderate	H to E	Increased sensitization and Continue marking of trees. Increased use of energy saving cooking stoves and Implementation of a comprehensive tree planting programme in accordance with the

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
concerns and air pollution within dwellings		to Major		land use zoning. Separate animal accommodation as well as cook places from living quarters;
Hazardous and Non Hazardous waste	Likely	Moderate	H	Put in place a program to minimize /reduce, re-use and recycling waste and Make use of landfills or use organic waste to produce compost. Put in place centralized collection containers for used torch batteries and dispose at a NEMA approved disposal area, or sold off to those who recycle them. Ensure there are incinerators for disposal of medical waste; Encourage organic farming and use chemical fertilizers in long term will be with support from the Settlement Extension personnel;
Agriculture and soil conservation	Likely	Minor to Moderate	H	Sensitize the Community on reduction of soil erosion. Promote hedge barrier planting using tree and/or grasses following contour lines; To conserve land, free ranging livestock will be discouraged in favor of “zero grazing”; No agricultural activities to be permitted in open wetlands, Riverine forests, within the KGR buffer zone and rocky hills whose gradient is in excess of 30 degrees.
Fragile Ecosystems wetlands, protected areas and potential for enhanced poaching	Almost Certain	Major	H-E	Strictly implement the land use zones which have been proposed; The OPM / Settlement to work closely with the UWA to strengthen patrols along the Game Reserve boundary; Maintain a buffer zone of at least 500 m to separate the Game Reserve; The management will list endangered or listed species for conservation; Designate all wetlands within the Settlement and make it known to the refugee community; Relocate those refugees who have settled within 50 metres of the wetlands and ensure no agricultural activities there in; Sensitize the community about the need to protect wildlife and the fact that poaching of wild game is illegal; The Settlement management will work closely with the UWA to discourage poaching of wildlife; Refugees will be encouraged to keep domestic birds to fulfill the need for bird

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
				meet;
Deforestation and the need to meet firewood demand	Almost Certain	Catastrophic	H-E	Designate specific zones within the project area which are to be maintained for forestation; while settlers are encouraged to plant trees along the edges of their land and some other specified areas; Plant mostly local <i>Leguminosae</i> species and/or fast growing species to maintain or increase crop production and conservation of soil;
Land use, Population and Settlement issues;	Likely	Moderate	H	Expose the Land use Master Plan to all stakeholders; Open boundary of protected area and Plant the buffer zone with trees which were originally indigenous to the area. Where appropriate Nationals who are to be evicted from the Settlement should be compensated in accordance with the law after conducting an Abbreviated Resettlement Action Plan (ARAP); Government to identify and follow up those who were displaced and determine whether their new places are not in conflict with the environmental laws; Sensitize the local community about Family planning /Control measures and provide appropriate birth control / contraceptive approaches; Ensure that all school going children actually go to school in line with the National Policy of UPE;
Health Concerns	Moderate	Moderate	H	The Health Centre III will be upgraded to Health Centre IV status with more outreach clinics such as Health Centre IIs and Health Centre Is; In the meantime Nationals should continue to benefit from supplies availed to the refugee community and the 30% rule will continue to apply;
Water Concerns	Moderate	Moderate	H	Conduct water and water sources analysis to ensure portability; Through sensitization encourage Rain Water Harvesting; Plan to conduct an adequate hydro geological survey to confirm sustainability; Develop an appropriate management and monitoring system of water quality and quantity; In future explore the possibility of exploiting the nearby Katonga River as a source for both domestic water and

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
				water for production;
Sanitation Concerns	<b>Moderate</b>	<b>Moderate</b>	<b>H</b>	Human Settlements to respect a 50 meters buffer zone around streams and wetland ecosystems; Latrines with Reusable light latrine floor concrete / Plastic slabs to be sunk downstream of wells and to be at least 30 meters from any groundwater source; Each household /family unit to have own latrine;
Education Concerns	<b>Moderate</b>	<b>Major</b>	<b>H -E</b>	Sensitize the refugee community on the need to take their children to school and eventually compel them to do so; Increase the number of classrooms and teachers to accommodate the increasing number of school going children; The Settlement to provide land for those who may wish to establish privately run schools in order to support government efforts;
Construction of Base Camp	<b>Moderate</b>	<b>Minor</b>	<b>M</b>	Ensure waste management facilities are in place; Plant appropriate trees within the camp to protect it from soil erosion and wind damage; As much as possible practice rain water harvesting; Separate hazardous waste from organic waste and dispose in line with Waste management regulations;

Key for Risk level:    **L** = low    **M** = medium    **H** = high    **E** = extreme

#### o.10 Environmental and Social management and Monitoring Plan (ESMMP)

It is a requirement (according to EIA guidelines) that an ESIA should have an Environment and Social Management and Monitoring Plan (ESMMP). In the case of the RS, environment monitoring must be carried out to ensure that the Settlement activities comply and adhere to environment requirements (laws and regulations). Any future development within the Settlement will therefore require a separate Environmental and Social Impact Study. However this ESMMP will take into consideration the UNHCR safeguards on environment management.

The Settlement monitoring plan will be guided by this ESMMP which will serve as a reference instrument for monitoring environmental compliance. In order to conduct the environmental monitoring it will be a requirement that the Rwamwanja Refugee

Settlement have in place a specialist environment supervisor (for the physical, biological and the social environment) capable of implementing the respective NEMA certificate of approval.

The monitoring will cover the following among others.

- Impact on wildlife in the Katonga Game Reserve, the Wetlands, and other sensitive ecological zones within the Settlement
- A survey and identification of endangered species including those on the IUCN Red List;
- Quality and Quantity of the water for both domestic needs and for production;
- Enforcement of the Land use planning zones;
- Management of Waste including hazardous waste;
- Trends in the vegetation cover to assess land degradation/degradation including tree planting activities;
- Health facilities as well as sanitation standards within the Settlement; and among others
- Protection of physical cultural resources should they be encountered

In addition, the Settlement Monitoring Environmentalist will inspect the entire Settlement regularly, and ensure that the mitigation measures in the EIS and all relevant environmental regulatory requirements concerning the Settlement are complied with. The Environmentalist will also conduct random inspections across the entire landscape of the Settlement.

Following these inspections, the Environmentalist will issue a monthly report a copy of which will be sent to the District Environment Officer and any other stakeholder whom the Settlement management will identify.

At closure of the Settlement (depending on the decision of the management), a final inspection report will be prepared showing the status of the environment, and what needs to be done to maintain environmental integrity in the project area.

This statement proposes that the local community will be part of the monitoring mechanism through involving them in the monitoring process. One way of doing this is to have a specific person on the Refugee Local councils where the local communities are represented. Communities should be involved in the reforestation monitoring exercise for example through their local leaders particularly the Refugee Council 1 Executive or an Environmental Liaison Unit that will be put in place by the commandant. This is necessary to reduce costs of monitoring through community involvement. The other stakeholders who will be involved in the monitoring include

the Local Government Leaders, NEMA, and the District Environment Office (Local Government).

Since this is likely to be mostly of recurrent expenditure, the Settlement Commandant will be expected to make an annual budget to meet the environmental costs. In this ESMMP only an indication of the likely costs for implementing the plan is provided which has been estimated at 274,600,000 Uganda shillings per annum. This figure excludes the cost of mitigation measures.

#### **0.11 Conclusion**

This report highlights the potential impacts to the environment particularly as they relate to the operation and management of the Rwamwanja Refugee Settlement. Although a number of alternatives were disclosed, the one that the Government had chosen prior to the study is the very one that has been developed further. Subsequently a number of potential impacts were discussed and appropriate mitigation measures proposed. Due to resource constraints, it was not possible to visit all the neighbouring districts and to exhaust the potential stakeholders.

Nevertheless it is proposed that after every 5 years, an audit of the project be conducted by a NEMA registered Environmental Auditor to confirm compliance. The proposed mitigation measures are the minimum since for some impacts such as the deforestation risk the likelihood has been found to be certain. The mitigations can only minimise this impact otherwise it is certain that deforestation will occur.

Finally, notwithstanding this EIS, any other developments that are proposed within the Settlement will be required to undergo a full EIA if they fall under Schedule Three of the National Environment ACT.

# **ENVIRONMENTAL AND SOCIAL IMPACT STATEMENT FOR THE RWAMWANJA REFUGEE SETTLEMENT, KAMWENGE DISTRICT**

## **1. INTRODUCTION**

### **1.1 Background**

Rwamwanja site was one of the old refugee Settlements which was selected by the Government of Uganda in the early 1960's to accommodate refugees. From that time it was used by the Rwandan refugees until 1994 when most of them left and returned to Rwanda following the liberation of their Country Rwanda. During the time the Rwandese refugees were in Rwamwanja, they acquired reasonable sizes of land mainly for grazing their animals and practicing some farming (bananas and beans). As a matter of fact, some refugees had sold land to indigenous Ugandans such that by 1994, the Settlement had a good number of Ugandan nationals. Following their departure in 1994, more Ugandans moved into the Settlement some of whom directly bought from the outgoing Rwandese, while others just moved and occupied what was seemingly free land on prompting from some of the local leaders in the surrounding districts. In due course many of them are said to have been allocated land by the relevant Government Institutions and processed freehold land titles as proof of ownership of the different plots of land (although this is still being contested in courts of law). Although no data was provided to the ESIA team, the Local Council 5 Chairman (Kamwenge District) estimated that the nationals who owned land were about 10,000 while including the workers the number could have been up to 20,000. This could not be independently confirmed. Subsequently, prior to the arrival of the Congolese refugees in April 2012 a number of large farms had been developed in the project area.

Following new fighting in the neighbouring Democratic Republic of Congo (DRC), many Congolese were forced out of their country into Uganda. This led the Uganda Government to re-open the Rwamwanja Settlement (RS), which was done on 17 April 2012. The opening of the Settlement was not welcomed by the indigenous settlers and there was a lot of resistance and violence which led Government into using forceful eviction of some nationals (some Nationals still remained and the UNHCR estimates that there up to 14,000 nationals still within the Settlement) which compounds the population pressure further.

Despite some of the information indicating that some of the former settlers moved to the neighbouring districts of Kyenjojo, Ibanda and other sub counties within Kamwenge District, there is limited information regarding the current location of the Ugandans who experienced this involuntary relocation. In addition no follow up has been done to monitor either their livelihood or their current interaction with the environment.

Rwamwanja Settlement covers approximately 41.9mi<sup>2</sup> which is equal to 108.52km<sup>2</sup> and is located within Nkoma and Bwizi Sub-Counties of Kamwenge district, about 45kms from Kyenjojo town along Kyenjojo – Kamwenge road. As at 21st August 2012, Rwamwanja had 21,208 refugees which had grown to 28,287 by 16th November 2012 and increasing. These were composed of 12,621 households of which 60% were children and between 25% composed of women. Men are a minority with 15%.

The exact number of nationals residing in the Settlement is not well documented although the UNHCR reckons that up to 14,000 locals are within the boundaries of the Settlement. Some of the stakeholders have suggested a maximum planning figure of 50,000 persons for the Settlement. However, the carrying capacity of the RS is not known.

On the other hand, the life time of a Refugee Settlement is not immediately determined with certainty. However, it is planned that the refugees may settle and feel that they are as well off as they were in their original home. A strategic objective is to plan for the Settlement to last at least 30 years (one generation). Thereafter the settlers will either have returned or been naturalised as Ugandans and will be free to settle anywhere in Uganda in accordance with the Uganda Constitution.

The Principal Caretaker of the Settlement is the Office of the Prime Minister (OPM). The OPM through the Department of Disaster Preparedness is mandated to coordinate emergency situations including the handling of refugees. OPM and the United Nations High Commission for Refugees (UNHCR) in consultation with the International Union for the Conservation of Nature (IUCN) have taken the initiative to conduct an Environment and Social Impact Assessment (ESIA) for Rwamwanja Refugee Settlement Project.

## **1.2 Purpose of the ESIA**

Under schedule III of the National Environment Act, the Rwamwanja Refugee Settlement project qualifies for a full environmental impact assessment. This

project bears the risk to lead to serious impacts on the environment because it involves settling so many people in a fragile ecological setting for extended periods of time, hence the requirement to undergo an ESIA. Indeed the scoping exercise which has been conducted revealed that the refugee Settlement is likely to lead to considerable land degradation including deforestation, stress on Water resources, disturbance to the Katonga Game Reserve and overpopulation among others. It is most likely to lead to significant impacts on both the local and regional environment unless deliberate measures are undertaken to mitigate the negative impacts of the Settlement. At the same time there will be a number of positive social impacts (e.g. job creation, increase in health and educational services and provision of additional water sources among others) which would require enhancement for the community to enjoy their full impacts. The main purpose of the ESIA therefore is to assess both, negative and positive impacts of the RS on the overall environment within Rwamwanja and its surroundings with a view to ensuring that: -

- The Settlement will respect the carrying capacity of the site and its surroundings (in order to be environmentally sustainable and socially acceptable); and
- The Refugee Settlement Project will comply with the provisions of the National Environment Act Cap 153, 1995 as well as with the other National Policies, Laws and Regulations.

### **1.3 Objectives of Environment and Social Impact Assessment**

The purpose of ESIA is to assess the potential impacts that the Refugee Settlement Project will have on both the biophysical and social environment.

The Primary objectives of the ESIA include the following: -

- To establish the biophysical and social baseline ;
- To elaborate recommendations for the mitigation of current and anticipated environmental and social impacts serving also as basis for the subsequent elaboration of an Environmental and Monitoring Management Plan;
- To conduct an Environmental and Social Impact Assessment (ESIA) and subsequently prepare an Environmental Impact Statement (EIS).

- Establish a link between the EIA and the Resettlement Action Plan (RAP)<sup>1</sup> should it be required;
- To ensure that the Rwamwanja Refugee Settlement Project complies with Uganda's applicable National Environmental and Social Legal Requirements as well as those of Multilateral Lenders and Development Partners as appropriate.

## **2. ESIA Methodology**

In general, the proposed study and report format is in line with the provisions governing ESIA procedures as contained in the National Environment Act Cap 153, 1995, The Environment Impact Assessment Guidelines, 1997; and the Environmental Impact Assessment Regulations, 1998. In particular the following steps will be followed: -

### **2.1 General Methodology**

#### **2.1.1 Site Examinations**

The whole Settlement was examined by a deliberate inspection from the beginning to the end, in addition to inspecting the ecologically sensitive areas such as steep hills, wetlands and other habitats having a high conservation value. This was done with a view to assessing all current and anticipated impacts with their magnitude caused by the Settlement Project. Due to the nature of the project and the likely spill over of the impacts, the assessment has also considered the immediate neighbouring villages and districts.

#### **2.1.2 Social, Physical and Biological Environment**

The ESIA team before preparing the Environment Impact Statement has inspected the state of the biodiversity in the area in addition to the Physical Environment. It has also surveyed the prevailing status with respect to the social environment (particularly with respect to employment, livelihood and health). This was done during the initial scoping where the following concerns were raised: -

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<sup>1</sup> If the ESIA finds that many people are likely to be displaced, it normally recommends that a RAP to handle the project affected people be conducted. In the case of this project, this may not arise since people were moved prior to the assessment.

- The area is water stressed where the savanna type vegetation is a transition from dry to moist savanna (see Langdale-Brown et al. 1964);
- Small seasonal ponds and Riverine forests alternate along the valley bottom;
- Most of the natural vegetation is being cleared for settlement, agriculture, firewood, charcoal and building materials;
- The existence of a continuous wetland along the stream bordering Katonga Game Reserve;
- The Settlement is in close proximity to the Albertine Rift Area of Regional Endemism;
- It was estimated that the affected population within the directly affected Sub Counties would by 2012 be 72,500 having grown from 66,500 in 2008;
- The death rate among children within the settlement is high with up to three children dying daily;
- The reproduction rate is also high;
- The poor sanitation situation in the area;

### **2.1.3 Literature Review**

Appropriate Literature review has been conducted to cover some of the historical background and other data that has been routinely collected. The review has also covered the relevant Environmental Laws and the Environmental Guidelines (*including the National Environment Act Cap 153 NEMA, 1997, Guidelines for Environmental Impact Assessment in Uganda; Environmental Impact Assessment - Reference Manual August 2002, Republic of Uganda, NEMA*) as well as the District Development plans for Kamwenge District. In addition the team has reviewed the UNHCR Environmental Assessment in Refugee – Related Operations – A Handbook for Project managers and practitioners.

### **2.1.4 Stakeholder Participation**

The ESIA team has involved most of the key stakeholders. These stakeholders included OPM, the community and their leaders within and around the Settlement, the district officials for Kamwenge and Kyenjojo Districts, local councils, UNHCR and its implementing partners as well as the IUCN among others. In identifying the stakeholder, it was taken that a stakeholder was an individual, group, or institution with a vested interest in the natural resources

of the Rwamwanja project area and/or who potentially will be affected by the Settlement activities and have something to gain or lose if conditions change or stay the same.

In defining stakeholders therefore it was important to consider those individuals, groups of people, organizations and all other interested parties whose participation and support are crucial to the Rwamwanja Settlement Project's success.

In the analysis of the stakeholder, the following are crucial;

- Stakeholder characteristics such as *knowledge* of the Rwamwanja Settlement area (Past and present knowledge),
- *interests* related to the Refugee Settlement project;
- *Position* for or against the Settlement (such as those who were evicted prior to Settlement),
- Potential alliances with other stakeholders, and
- Ability to affect the project process (through power and/or leadership) such as the local district leadership;

In this regard, an attempt was made to

- Identify key stakeholders and their interest;
- Assess the potential influence of the stakeholder on the project; and
- Potential for engaging the stakeholders;

**Identification of Key Stakeholders and their Interests :** - To identify the key stakeholders it was necessary to consider the likely threat and opportunity factors to Refugee Settlement program /project such as: -

- Will the stakeholder be a beneficial or will he lose benefits due to the Settlement;
- Are these groups /individuals/ organizations key players in the Refugee Settlement project?
- What are the resources to be impacted and who is the beneficiary to these resources?
- Are there claimants to the resources likely to be impacted by the Settlement project?
- Which are Government sectors Ministries or institutions involved in the Refugee Settlement project?

**Interests, Influence & Importance of Stakeholders:** - To appreciate the likely influence it is necessary to inquire about the powers that are likely to make critical

decisions for or against the Rwamwanja Settlement project. These will include the following: -

- Who could make decisions on critical issues for the progress of the Settlement;
- Who are the responsible people from the lowest to the highest levels for the entire spectrum of the Rwamwanja Settlement;
- Who has potential to obstruct the Refugee Settlement programme either through influence peddling or legal redress?
- Who has the historical or institutional memory regarding the Rwamwanja Settlement in the project zone?
- Are there marginalized people who should have been involved right at the inception of the project?

**Stakeholders Engagement:** - This determines how the stakeholders will be involved in the Settlement program. Some of the impacts on the Settlement are due to external forces such as the host community comprised of Ugandans of different opinions.

The key stakeholders which are an important part of the Settlement Administrative structure as elaborated under the Administrative Framework for the Rwamwanja Settlement Project (in this report) are outlined in the stakeholder matrix below Table 2.1: -

**Table2.1: Stakeholder Matrix showing roles and mandate**

Category	Stakeholder	Mandate	Potential role	Marginalized
National	OPM	Overall in charge of the Refugee programme in Uganda	In charge of disaster preparedness in Uganda	No
	Department of Disaster Preparedness	In charge of managing Emerging Disasters In Uganda	Distribution of relief items including food	No
	NEMA	Ensures Environmental Compliance and regulates activities that affect the environment	Will support environmental compliance for the benefit of all stakeholders	No
	Ministry of Lands, Housing and Urban Development	Survey and Valuation of properties and/or compensation	Custody of land titles through the Uganda Land Commission for the Settlement area plus valuation of	No

Category	Stakeholder	Mandate	Potential role	Marginalized
			properties if necessary	
	Wetland Management Department, Ministry of Water and Environment	Mandated to manage wetlands and ensure wise use and handling of wetlands in Uganda	Will monitor developments within wetlands to ensure their sustainable use	No
	Department of Museums and Monuments, Ministry of Tourism, Wildlife and Heritage (MTWH)	It is the Lead Agency for artefacts, antiquities and monuments once encountered within the Settlement	To be involved in identification of the Physical Cultural Resources (PCRs) and will be invited when artefacts are found within the project area	No
	Directorate of Water Resources Management (DWRM)	Develops and maintains National Water Laws, and regulates quality and quantity of water resources in the country.	Will oversee water extraction as well as ensuring quality and quantity for all? users including provision of water extraction permits	No
	Ministry of Water and Environment	Responsible for the environmental concerns including wetlands, water bodies and natural resources	Supports environmental compliance for the benefit of all stakeholders	No
	Uganda Wildlife Authority (UWA)	Mandated by the Uganda Wildlife Act, Cap 200 to assume responsibility for Wildlife in Uganda.	To help in managing the interface between the KGR and the Settlement as well as controlling poaching of wildlife in KGR	No
Development and Humanitarian Aid Partners	United Nations High Commissioner for Refugees (UNHCR)	To provide Technical and Financial support to the Settlement	Facilitating the Settlement (financially and technically)	No
	United	UN's specialized	Technical advice on	No

Category	Stakeholder	Mandate	Potential role	Marginalized
	Nations Environment Programme (UNEP)	Agency on Environment	Environment Management	
	UNICEF	UN's specialized Agency on Children, Education and Culture	Technical advice on Livelihood, Education and Cultural issues	No
	Uganda Red Cross	Mobilization, emergency response and sensitization	Community mobilization, emergency response and livelihood	No
	World Vision	Mobilize, sensitize, and program implementation	Sensitization on sanitation and environment concerns	No
	Religious Institutions and NGOs working in the Settlement	Mobilize, sensitize and operate among the impacted communities in RS and its surroundings	Community mobilization, community sensitization, cooperation with Settlement progress	Some are
Local	Local Government of the Districts from LCV to LC1s	Administrative Units (especially Kamwenge District) to provide enabling environment for the Settlement at local level	Facilitate coordination between the host community and the refugees in addition to providing enabling environment to the project	No
Local communities	Host communities within and around RS	Owners of land and property affected by the Settlement and any other impacts in their local areas	Can reject or accept the project thereby influencing project progress, or may provide labour and cooperation	Sometimes
	Refugees			Sometimes
Protection of nature	IUCN	Valuing and conserving nature, effective and equitable governance of nature's use,	Conservation, advocacy and awareness	No

Category	Stakeholder	Mandate	Potential role	Marginalized
		promoting nature-based solutions		
Protection of nature	Nature Uganda	Wildlife conservation, and program implementation	Conservation, advocacy and awareness	No

### 2.1.5 Screening and Scoping

The Rwamwanja Settlement underwent both the screening and scoping process. During the screening process, it was observed that the Settlement was having a high rate of refugees whose numbers were increasing rapidly leading to unprecedented pressure on the land resources within and outside of the Settlement. Moreover it was noticed that the Settlement was sharing a boundary with the Katonga Game Reserve (KGR) to the south east. Under the Third Schedule to the NEA Cap 153, this Settlement project lies under Schedule 3, which lists projects out of character with the local environment as required to comply with the ESIA process. Following the UNHCR checklist (UNHCR/Care International 2005), the Rwamwanja Settlement qualifies to among those for which an ESIA should be conducted. Subsequently the scoping report together with proposed TORs was submitted to the Authority for further input.

## 2.2 Specific Approaches

More detailed analysis of the environment was done to cover the land surface, the biological environment as well as the physical environment. The following was the approach: -

### 2.2.1 GIS-Mapping and Satellite Imagery

In order to get the basic setup, satellite images for the Rwamwanja Settlement area were taken from Googlemaps<sup>2</sup>, which uses the same satellite data as Google Earth. Google Earth acquires the best imagery available, most of which is approximately one to three years old. The images found for the Settlement area were taken in June

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<sup>2</sup> [www.googlemaps.com](http://www.googlemaps.com)

2009 having mostly a relatively low resolution. Nevertheless, they were adequate to identify land forms, vegetation types and land use. The said images were then geo-referenced using a GIS-software in order to fit exactly over Settlement area.

### **2.2.2 Elaboration of a vegetation key**

A vegetation key has been agreed upon in order to map the vegetation of Rwamwanja Settlement based on a first description of vegetation types as derived from the available satellite images. Then ground truth was obtained recording and registering selected locations for different vegetation types with a GPS in order to calibrate the vegetation types in the field.

Subsequently, as part of the fieldwork, each vegetation type was described (horizontal and vertical structure, species composition, vegetation cover, average slope and soil type (FAO/UNESCO/ISRIC 1988)). In addition, appropriate photos were taken to illustrate each vegetation type.

### **2.2.3 Vegetation mapping**

Finally five vegetation types according to the Yangambi classification (see Scientific Council for Africa South of the Sahara 1956 and Bloesch 2002) have been described for the Settlement area reflecting the situation of June 2009:

These are as follows: -

- Shrub savanna on hilltops (mostly rocky);
- Tree savanna;
- Savanna woodland;
- Riverine forest;
- Wetland.

In addition, small dense semi-deciduous thicket clumps (woody patches) are scattered in the tree and savanna woodland.

These five main vegetation types are described in Chapter 5 below. The distinction between tree savanna and savanna woodland has been done using (i) pictures of the

Settlement area taken from a few good viewpoints in the field and (ii) the satellite images. The mapping of the other three vegetation types was done as follows: -

- The highest hilltops (mostly rocky) with slopes >30% have been identified using a geo-referenced topographic map;
- Larger Riverine forests visible on the satellite images have been mapped directly using the satellite images. In addition, a strip of a 50 meters width on both sides of rivers and wetlands have been mapped which may include potential Riverine forests which are too thin to be identified on the satellite images;
- Wetlands have been identified using the satellite images.

#### **2.2.4 Land use mapping**

The following land use types have been described for the Rwamwanja Settlement area based on situation during the field visits (23rd November – 3rd December 2012) as shown under Annex 1 – Field work program.

- Agriculture plots with trees;
- Wetland ecosystems (open wetlands and Riverine forests) ;
- Rocky hills over most hill summits;
- Major wetland system along the Boundary between the RS and the KGR;

The first land use type corresponds to the area covered by tree savannas and savanna woodlands. These two vegetation types are currently mainly used for agricultural purposes.

#### **2.2.5 Floristic survey**

Vascular plant species have been recorded focusing on dominant species and species with high conservation values following an opportunistic sampling method. The following botanical books have been consulted for plant identification and verification:

- Useful trees and shrubs for Uganda. Identification, propagation and management for agricultural and pastoral communities (Katende et al. 1995);
- Les plantes ligneuses du Rwanda. Flore, écologie et usages (Bloesch et al. 2009);
- A plant list of all recorded specimen (80) has been elaborated (**see Annex 2**).

#### **2.2.6 Former land use**

In order to have an understanding of the land use prior to the re-opening of the Settlement in 2012, Google Earth satellite images from June 2009 have been used. In addition, interviews were conducted with selected resource people (all over 70 years) who gave an indication of the land use and Settlement patterns from before

the Settlements were opened in the 60's until present. Finally, the current species composition and the abundance of encroaching and ruderal plants have been assessed to understand the former land use within Rwamwanja Settlement.

**2.2.7 Methodology for Social Data Analysis**

A total of 282 households/individuals within the Settlement and outside the Settlement were interviewed (see questionnaire in Annex 14). Care was taken to interview separately the nationals from the Congolese refugees. Analysis was conducted with the help of EpiData Version 3.1 software and the improved version of the SPSS Software version 16.

Secondly, Bivariate analysis was performed with the use of cross tabulations like Pearson chi square ( $\chi^2$ ) to establish the relationship between the dependent and independent variables. The Pearson chi Square ( $\chi^2$ ) was derived as follows.

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \dots\dots\dots (i)$$

With (n-1) degrees of freedom

Where,  $O_{ij}$  is the observed frequency in row  $i$  and column  $j$

$E_{ij}$  is the expected frequency in row  $i$  and column  $j$ .

**2.2.8 Impact Assessment methodology**

The impact assessment partly relied on expert judgment of the team and information derived from checklists, existing literature, field observations, measurements and records and Information from consultations with key stakeholders in the project area.

Furthermore, a risk assessment was carried out to determine the level of significance of the biodiversity impacts (Table 2.2) and is based on the AS/NZ Standard 4360: 1999.

*Table 2.2: Risk Assessment Approach*

Likelihood	Magnitude of Environment / Biodiversity Impacts				
	Insignificant (I)	Minor (Mi)	Moderate (M)	Major (Ma)	Catastrophic (C)
Almost certain (AC)	H	H	E	E	E
Likely (L)	M	H	H	E	E

Moderate (M)	L	M	H	E	E
Unlikely (U)	L	L	M	H	E
Rare (R)	L	L	M	H	H

L = low                      M = medium                      H = high                      E = extreme

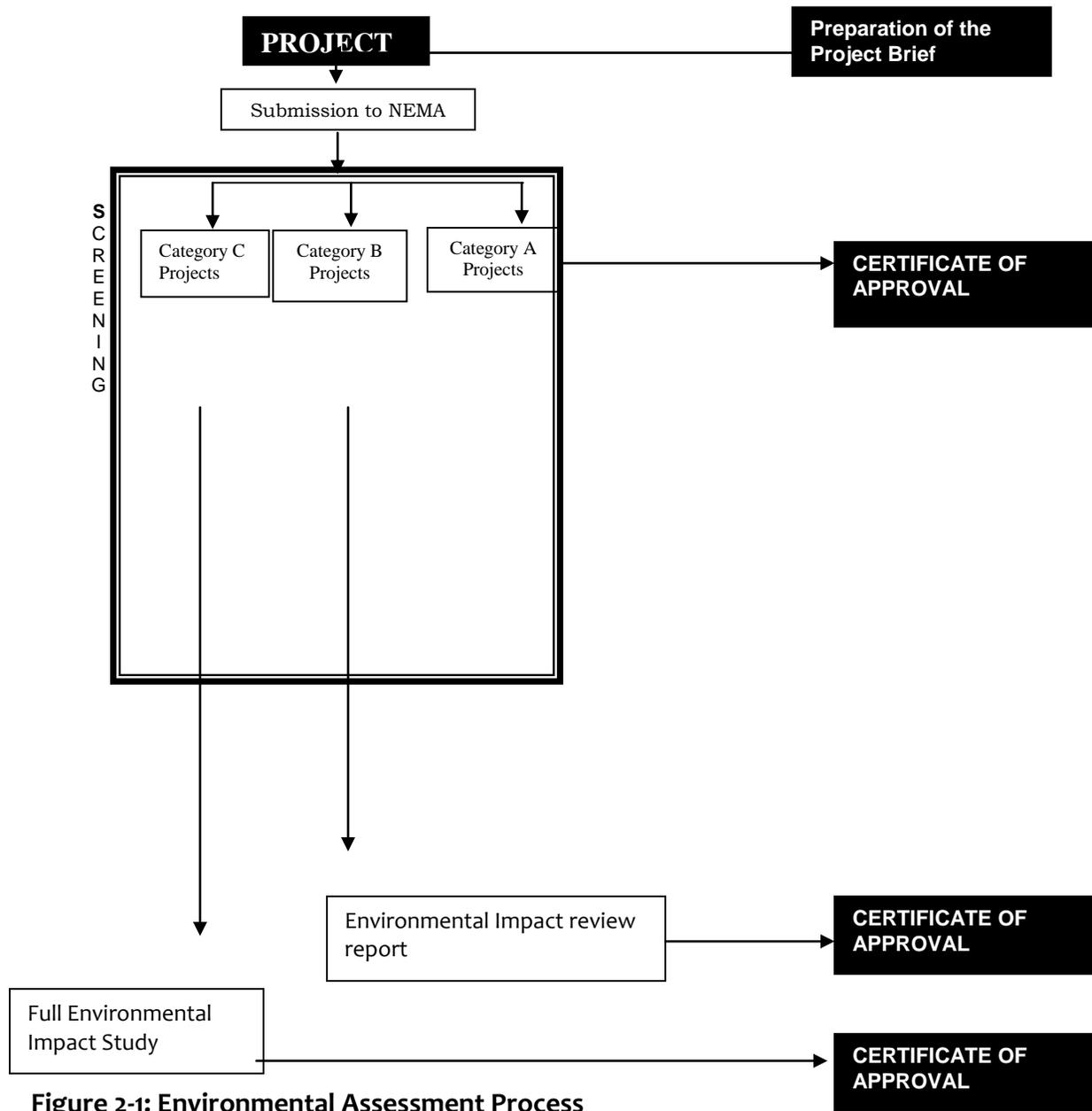
Finally the impacts are considered in terms of their status (positive or negative) and the confidence in the ascribed impact significance rating is noted.

### 2.2.9 Disclosure Process

Following the writing of the draft final report, the statement will be exposed to the stakeholders especially the key Lead Agencies and the Local Government. A debriefing session to the key stakeholders and the participating /implementing partners was also held. The purpose of the disclosure is to obtain any feedback from these affected stakeholders on the identified potential impacts.

### 2.2.10 ESIA Process Chart

The ESIA process in Uganda starts with a Project Brief or a project scoping which is submitted to the Authority to consider whether the project will require an ESIA or if the relevant mitigations have been fully addressed in the Brief, development can be allowed to proceed.



**Figure 2-1: Environmental Assessment Process**

Otherwise a screening is conducted that allows the classification of the project to determine if it is a category A, B or C project. For Category A projects, a Certificate of Approval (CoA) for the project to proceed is given. Otherwise if it is a category B project, the Authority will direct that an Environmental Impact Review be conducted before a CoA is provided. Otherwise if it is a category C project then a full ESIA must be conducted before a CoA is provided by the Authority. The steps are provided in Fig

2-1 (Environmental Assessment Process). The Rwamwanja Settlement is a category C project.

### **3 PROJECT DESCRIPTION**

This chapter describes the scope and nature of the Rwamwanja Settlement Project.

#### **3.1 Objectives of the refugee Resettlement**

The broad objectives at the National level are: -

- To provide protection to a refugee or displaced person from either a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social or political group, or a political opinion;
- To ensure that the dignity of the displaced person / refugee is respected and provide a new livelihood for refugees through Resettlement;

The specific objectives include the following: -

- *Through Resettlement*, to provide international protection and meet the specific needs of individual refugees whose life, liberty, safety, health or other fundamental rights are at risk in their home country.
- *Through Resettlement*, provide a durable solution for larger numbers or groups of refugees, alongside the other durable solutions of voluntary repatriation and local integration.
- *To enable Uganda* to express international solidarity and responsibility by sharing responsibility for refugee protection, and reducing problems impacting the national communities in Uganda (as a country of asylum).

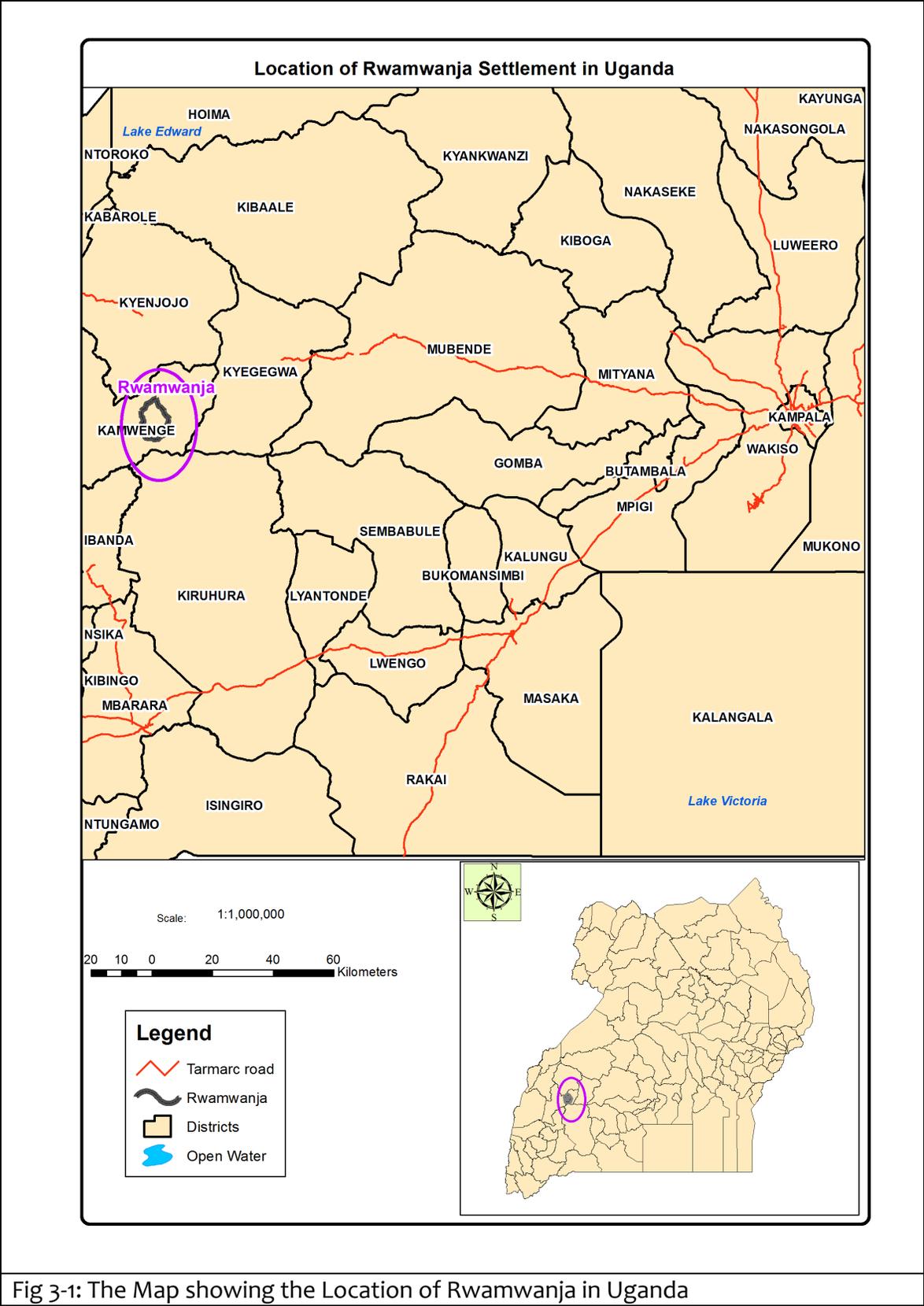
#### **3.2 Justification of the Resettlement Programme**

Uganda is a signatory to the UNHCR Convention and therefore is mandated to help refugees from other countries who are facing persecution due differences of opinion, or political disagreements among others. Early in 2012, due the instability in the DRC, thousands of DRC citizens were forced out of their country to look for protection elsewhere. When they arrived in Uganda they were in a desperate situation and while at the Uganda border were quickly becoming a source of insecurity. As the Refugee policy, it was necessary that the refugees are removed from the boarder of their country and placed a good distance away to remove the possibility of their returning to cause more misunderstandings between the host country (Uganda) and the DRC. The Selected area, Rwamwanja Settlement, had performed as refugee Settlement

from the 1960's up to 1994 when most of the Rwandese settlers left to return to their country

### **3.3 Location of the Rwamwanja Resettlement Project**

Rwamwanja Settlement is situated in Nkoma and Bwizi Sub counties and borders with Katonga Game Reserve within Kamwenge district. The map of Kamwenge district is provided as Fig 3-1 below. Kamwenge District was formally part of Kabarole District. It became a district in 2000. Kamwenge District shares borders with the Districts of Kyenjojo in the East, Kabarole in the West, Kibale and Kyenjojo in the North and Mbarara in the South.



### **3.4 Pre Settlement Activities**

Information on the Pre-settlement activities was provided by a number of elders who used to be in the area before the first set of refugees came into Uganda. These elders included Mzee Rwabwogo, and Mr. Gaston.

According to the LC1 C/Person-Katalyeba Village Mr Gaston, an elder; the Settlement area used to house about 60 households. It was assumed then that this was a sparse population and the county chief at the time requested the King to get more people possibly cattle keepers. Since they were cattle keepers, they quickly expanded and begun to go beyond the Settlement borders.

In early 1980's it is alleged that, disputes between the settlers and the refugees erupted, prompting the then Minister of Culture and Community Development Hon. Rwanyarare, to intervene and re-demarcate the area after which peace was once again restored. After 1986, the area also became a training area for the Rwandese Patriotic Front (RPF) who eventually left in 1994 to take –the power in Rwanda.

These refugees were mostly cattle keepers and their departure in 1994 left the land sparsely populated and it rapidly became dense bush Mzee Rwabwoogo reported that they were overwhelmed with wild pigs which attacked their food. In 1997, some of the leaders in Toro kingdom encouraged the local people to go back to the Resettlement and reclaim their land. At this point there was massive movement of people from neighbouring districts (including Kyegegwa, Kyenjojo, Kabarole Bushenyi, Rukungiri, Kiruhura among other) who moved into the area and started development activities. Some claimed that they got land titles and became the bonafide owners of the land.

Removing these newly settled people became a contentious issue in 2012 when Government wanted to reuse the Settlement for the Congolese refugees. Many were displaced by force and even the base commandant of the Settlement was killed by resisting settlers. There is no information as to where these people have since gone to and what impacts they are causing to the environment.

### **3.5 Settlement Activities and Operations**

The main objective of the Settlement is to settle refugees and offer them sustainable livelihood. The main livelihood activities therefore include:

- Agricultural activities (e,g, agro-forestry projects for food security purposes);
- Provision of health and educational services

- Provision of Water and sanitation services (e.g. borehole construction and other forms of water supply);
- Construction of roads within the Settlement (access roads as well as maintenance and widening of existing roads)
- Ensure a sustainable waste management strategy;
- Support afforestation measures for security of wood supply for fuel and other uses;
- Any other activity that will help to improve the livelihood of the settlers.

There are at least four phases of the Settlement exercise including:

- Reception and registration of refugees
- Temporary Settlement in transit camps/sites
- Allocation of plots of land;
- Settling in and access to various social facilities;

At the peak of the refugee inflows, their number was increasing at a rate of approximately 3,000 individuals per week. At the same time there were not enough resources to match this inflow appropriately.

### **3.6 Activities and operation of the Settlement**

On arrival refugees are given a plastic sheeting to construct some temporary shelter and later permanent shelter out of poles mud and wattle/reeds with grass thatched roofs. This type of shelter construction is approximately 60% biomass.

Each refugee household arriving at Rwamwanja receives 0.5 hectares (50m x 100m) of agricultural land within the Settlement area. Although some of the refugees have claimed that due to minimal agricultural land, new refugees only get 0.32 hectares (40m x 80m). In some cases, few refugee households merge their agricultural land together in order to practice community farming.

In addition to the allocation of 0.5 hectares of land, the arriving refugees are provided with adequate quantities of food in the initial stages of their settlement. The families are provided a full ration for the first three years. This is reduced to 60% of the full ration during the 5<sup>th</sup> and 6<sup>th</sup> year of settlement. After this they are provided with 50% of the full ration. These measures ensure that the refugees will have a relatively comfortable living within the Rwamwanja Settlement

The Settlement project is coordinated by OPM and together with UNHCR. The implementing partners include OXFAM, World Vision, AAHI, WFP and ADRA.

## **4 POLICY LEGAL AND INSTITUTIONAL FRAMEWORK**

This chapter discusses the Policy, Legal and Institutional Framework which is relevant to the Settlement Project on the one hand and environment management on the other. The Rwamwanja Settlement is a large Project considering that it covers just over 40 square miles and it may hold a refugee population in excess of 50,000 people. Under schedule III of the national environment Act, this project qualifies for a full environmental impact assessment having the potential to lead to serious impacts on the environment thereby requiring to undergo an Environmental and Social Impact Assessment (ESIA). In Uganda there is a deliberate National Policy and Legal Framework to ensure that major developments are done in line with the law and are sustainable in the long term. The following paragraphs describe the Policy, Institutional and Legal Framework within which environmentally safe development can be done.

### **4.1 Policy Framework**

#### **4.1.1 The National Environment Management Policy**

The Government of Uganda Policy as outlined in the National Environment Management Policy stipulates as follows:

- An Environmental and Social Impact Assessment (ESIA) shall be conducted for planned policies and projects that are likely to or will have significant impacts on the environment so that adverse impacts can be foreseen, eliminated or minimised.
- ESIA process shall be interdisciplinary.
- ESIA process shall be fully transparent so that all stakeholders will have access to it and that the process will serve to provide a balance between environmental, economic, social and cultural values for sustainable development in the country.

#### **4.1.2 The National Water Policy, 1999**

The Rwamwanja Settlement is in a water stressed area and yet there are a few seasonal streams that are important for the conservation of biodiversity in the area.

The Settlement is likely to increase the water demand and at the same time it may disturb the water catchment through land degradation. The NWA is relevant to the ESIA because it provides guidance on the development and management of the Water Resources of Uganda in an integrated and sustainable manner. The policy aims at providing adequate quality and quantity of water for all social and economic needs without compromising the water needs for the future generations. The Policy emphasizes full participation of all the stakeholders in the water sector.

#### **4.1.3 The Policy on the Conservation and Management of Wetlands, 1995**

A casual observation shows many albeit small wetlands across the entire Settlement. These are mostly seasonal wetlands and are necessarily fragile. These fragile ecosystems are exposed to the increase land use in the Settlement what may lead to increased degradation of the wetlands. The National Policy for the Conservation and Management of Wetlands will be relevant to this ESIA as it aims at curtailing loss of wetland resources and ensuring that benefits from wetlands are equitably distributed to all people of Uganda. The Wetland Policy does among others call for the application of environmental impact assessment procedures on all activities to be carried out in a wetland so as to ensure that wetland development is well planned and managed.

#### **4.1.4 National Gender Policy, 1997**

While conducting the scoping exercise, it was found that children are over presented in the Settlement having a share of over 60% of the refugee population. The percentage of women was between 20 to 25% while the men and youths were about 15%. Already the Settlement policy insists that at least 40% of the positions should go to women. Under this scenario it will be necessary to consider both men and women for jobs as well as other benefits which will become available in the Settlement. At the same time under complimentary considerations, a proportion of such benefits should also go to the host community taking into account gender equity. The impacts of the Settlement project will affect differently both men and women requiring a comprehensive gender responsive analysis while conducting the ESIA. For this reason, the National Gender Policy is relevant to this Settlement project since the policy promotes the participation of both men and women in all the stages of the project cycle. The policy emphasizes equal access to and control over economically significant resources and benefits as they will accrue to the Rwamwanja Resettlement.

#### **4.1.5 National AIDS Policy and National Strategic Framework for HIV/AIDS activities in Uganda (2003/04 – 2005/06)**

Although there is potential for different types of epidemics (such as Ebola and Cholera) to invade the Settlement, HIV/AIDS is the biggest threat to this young population. The Ministry of Health has proved that they do have capacity to handle such epidemics whenever they surface. On the other hand, HIV/AIDS is a major concern at the national level and in recent times there are signs that the prevalence is raising. The high number of women compared to the available men within the refugee community could easily increase the potential to transmit HIV/AIDS and other Sexually Transmitted Diseases (STD) among the communities within the Settlement and among the host communities. The National AIDS Policy is aimed at managing the HIV/AIDS pandemic and provides guidance on how to approach the pandemic. Together with the National Strategic Framework for HIV/AIDS activities in Uganda, it provides overall guidance for activities geared towards preventing the spread of HIV/AIDS. This policy will be most relevant to the project area.

#### **4.1.6 National Resettlement/ Land Acquisition Policy**

The national policy highlights compensation of involuntarily resettled people/communities rather than Resettlement. This is relevant since a number of nationals were evicted without compensation or follow up. Their vulnerability was not established either.

### **4.2 Legal Framework**

This section examines the operating Legal Provisions relevant to both resettlement, and the related activities within the Settlement and those among the host community. The overriding Law in Uganda is the Constitution of the Republic of Uganda.

#### **4.2.1 The Constitution of the Republic of Uganda, 1995**

Chapter Three, Section 245 of the 1995 Constitution of the Republic of Uganda stipulates that Parliament shall by Law provide measures intended to protect and preserve the environment from abuse, pollution and degradation. It also provides for measures intended to manage the Environment for sustainable development and promotion of environmental awareness. All the people living in Uganda are entitled to a clean and healthy environment as enshrined in Article 39 of the Constitution.

Provisions of the Constitution will fortify measures intended to preserve the environmental and social concerns during the entire lifetime of the Settlement.

#### **4.2.2 The National Environment Act, Cap 153**

In this Act Cap 153 and in particular Schedule Three, it does indicate that large urban development projects (Section 2) or large projects out of character with the surroundings (Section 1- General) such as the present Rwamwanja Settlement project are among the activities that do require a full ESIA. The project area is composed of undulating terrain with a few hills having some steep slopes ( $\geq 30\%$ ). The Act spells out Principles of Environmental Management and the rights to a Decent Environment; Institutional Arrangements, Environmental Planning, Environmental Regulations, Environmental Standards, Environmental Restoration Orders, and Environmental Easements among others. All these will be relevant during the conducting of an ESIA for the Settlement, and will be referred to in the Certificate of Approval that will be provided by the NEMA before the full development of the Settlement area can be permitted to commence.

#### **4.2.3 The Water Act Cap 152, 1995**

This Act provides for the use, protection and management of water resources and supply; to provide for the Constitution of water and sewerage authorities; and to facilitate the devolution of water supply and sewerage undertakings. Section 4 of the Water Act requires the coordination of all public and private activities, which may influence the quality, quantity, distribution, use, or management of water resources. Section 31, subsection (1) of the Water Act deals with prohibition of pollution to water and stipulates that a person commits an offence who, unless authorised under this part of the Act, causes or allows

- Waste to come into contact with any water;
- Waste to be discharged directly or indirectly into water
- Water to be polluted.

The project area is water stressed and there will be need to make provision to meet the additional needs of the refugees and their livestock for water. Large numbers of refugees within a water stressed environment have potential to contravene various provisions of the Act. For this reason, the Act is an important tool during the conduction of an ESIA for the proposed Settlement project.

#### **4.2.4 The Land Act, Cap 227**

The Land Act provides for tenure, ownership and management of land. Part III Sections 43, 44, and 45 specifically address the utilization of land in accordance with the relevant Statutes and Acts of environmental concern, which include The Forest Act, The Mining Act, The National Environment Act, The Water Act, and any other law. In addition section 45 addresses the control of environmentally sensitive areas (here italicised for emphasis).

Moreover, to the relevant environmental sections of the Land Act, 1998” (sections 42, 43, 44, 45, 70, 71, and 72) *specific attention will be taken of section 40 of the Land Act which deals with Conditions of Transfer of Land by family. Subsection (1) states that No person shall enter into any contract for or actually sell .....the land on which that person usually lives with a spouse or dependant children of the age of 18 or above except with prior written consent of either the spouse or the children...*”

While the Settlement land has been gazetted as Government land with the Uganda Land Commission, there have been reports that some of the land is titled and belongs to some citizens many of whom were evicted. A few are still on the ground awaiting their fate. It is in this respect that the Act becomes most relevant to the Settlement project.

#### **4.2.5 The Survey Act, 1994**

A preliminary survey of the Rwamwanja project area has been conducted. A more detailed survey will be done before a land title for the Settlement can be issued. Survey operations in Uganda are governed by the Survey Act. Therefore this Act becomes relevant to the Settlement project, because before any attempts are made to acquire a land title in any part of the country, a survey of the area has to be conducted.

Under this Act, the Commissioner of Surveys can authorize the carrying out of a survey of any land in Uganda if it is necessary. However there are conditions to the survey such that where a general survey is necessary, notice of such specifying the limits of the area to be affected has to be published in the Uganda Gazette.

#### **4.2.6 The National Forestry and Tree Planting Act, 2003**

Although the Rwamwanja project does not encroach on any Forest reserve, the area has quite a high tree cover in general with numerous narrow riverine forests along the mostly seasonal streams. At the same time the Refugee community will need large volumes of forest products in form of Firewood, building materials (poles etc) and other construction needs. The National Forest and Tree Planting (NFTP) Act of 2003, section 14 and 32 requires everybody/organization to go through the legally established procedures if is to operate or extract products from the Forest Reserves.

The only privilege that exist as established by section 33 of the NFTP Act of 2003 is extraction of forest produce such as wood fuel for domestic use. Unfortunately the largest deforestation is taking place within forests outside the protected area where the NFTP is weak.

Section 38 of the National Forestry and Tree Planting Act, 2003 also require a person intending to undertake a project or activity which may, or is likely to have a significant impact on a forest to undertake an environmental impact assessment.

Among others, this Act provides for the sustainable use of forest resources and the enhancement of the productive capacity of forests and provides for the promotion of tree planting. This Act is relevant to the Settlement project because of the requirement to protect trees and related biodiversity in forested areas within the Settlement.

#### **4.2.7 The Land Acquisition Act, 1965**

Since 1995, the land has been under occupation by different groups of Ugandan nationals; Government has had to evict some of these settlers while some (14,000<sup>3</sup> according to UNHCR, Sakura Atsumi, 5 Dec. 2012) still remain in place as government ponders on how to handle them. For this reason, the Land Acquisition Act is relevant to the Settlement project because it provides for the acquisition of and legal proceedings for the land including the following: -

- Power to enter on and examine the land;
- Declaration that land is needed for Public purposes;
- Land to be marked out including notice to persons having an interest in the said land;
- Inquiry and award including taking possession, withdrawal from acquisition, acquisition of part of a house, manufactory or any other building;
- Temporary occupation for waste or arable land for public purposes as well as end to temporary occupation.

The Act provides for legal proceedings including appeals, references to the court, enforcement of right to possession and rules on procedures among others.

#### **4.2.8 The Historical and Monuments Act, 1967**

This Act provides for the preservation and protection of historical monuments and objects of archaeological pale-ontological ethnographical and traditional interests.

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<sup>3</sup> The figure of 14,000 could not be confirmed since Settlement Commandant believed that the nationals were fewer. In general there is a lot of uncertainty regarding the numbers on the ground.

Under this Act the Minister has wide ranging powers to protect any of the above objects and under Section 8, no person whether owner or not shall cultivate or plough the soil so as to effect to its detriment any object declared to be protected or preserved, and no alteration is permitted on any object declared to be protected or preserved;

And under section 11, any person who discovers any object which may reasonably be considered to be a historical monument or an object of archaeological, paleontological, ethnographical, and traditional interests is required to report it to the Conservator of Antiquities within 14 days of the discovery.

#### **4.2.9 The National Environment (Minimum Standards for the Management of Soil Quality) Regulations, 2001**

The National Environment (Minimum Standards for Management of Soil Quality) Regulations provides for establishment of minimum of soil quality, soils to be used only with conservation measures, determination of soil parameters, general prohibition, guidelines for soil conservation and the function of environmental inspectors among others. Although for this project it is not expected that soil tests will be done, the Act is relevant since it provides a pivotal role in enforcing soil conservation measures in general and for agricultural practices in particular.

#### **4.2.10 The National Environment (Hilly and Mountainous Area Management) Regulations, 2000** (*Uganda Section 107 of the National Environment Act Cap 153*)

The Settlement project will is located within hilly terrain in Kamwenge District and some areas may be described as hilly and mountainous areas. The Regulations will be particularly relevant to this Settlement project because they provide for identification of mountainous and hilly areas, restrictions on the use of mountainous and hilly areas, the role of Local Councils as well as the duty of the land owners, occupiers and users. The Regulations provide for the prevention of fires in hilly and mountainous areas, land use mapping, afforestation and reforestation, grazing of livestock, rules for soil conservation and introduction of alien and exotic species among others.

Moreover, District Councils shall make by-laws identifying mountainous and hilly areas within its jurisdiction which are at risk from environmental degradation. An area is at risk if:

- It is prone to soil erosion;
- Landslides have occurred in an area;

- Mudflows have occurred in an area;
- Vegetation cover has been removed or is likely to be removed from the area at a rate faster than it is being replaced;
- Any other land use activity in such an area that is likely to lead to environmental degradation.

Every land owner or occupier shall while utilising land in a mountainous and hilly area:

- Observe the carrying capacity of the land;
- Carry out soil conservation measures;
- Utilise underground and surface water resources;
- Carry out measures for the protection of water catchment areas;
- Use the best available technologies to minimise significant risks to ecological and landscape aspects;
- Maintain such vegetation cover as may be determined by and agricultural extension officer or local environment committee;
- On any project where an EIA / ESIA is required in a mountainous or hilly area where the slope exceeds 15% shall make an application to the Local Environment Committee of the Local Government for development approval.
- 

#### **4.2.11 Town and Country Planning Act, Cap 246**

This Act aims at consolidating the orderly and progressive development of land, towns and other areas whether urban or rural. The Act provides for planning areas and regulation on compensation regarding properties within planning areas among others.

#### **4.2.12 Local Government Act, Cap 243**

The Act provides for devolution and decentralization of functions, powers and services ensuring good governance and democratic participation in and control of decision making by the people to provide for the administrative set up of Local Governments. The Act provides for a five tier political and administrative structure from the Local Council (LC) 5 to Local Council 1. Settlement projects are required to comply with the LC system to promote the smooth running of the project within the local communities.

#### **4.2.13 The Uganda Wildlife Act, Cap 200**

The Rwamwanja Settlement is bounded by the Katonga Game Reserve and already there have been reports that some of the refugees have been apprehended for

poaching wild game. It is obvious then that the Settlement activities are likely to impact on the wildlife resources there in. The Uganda Wildlife Act is relevant to this Settlement project because the Act defines wildlife as any feral plant or animal of a species native to Uganda. It vests ownership of wild animals and plants in Government for the benefit of all Ugandan people. The Act creates the Uganda Wildlife Authority whose responsibility it is to execute the Act.

#### **4.2.14 The Public Health Act, 1964**

The Settlement project will be implemented with the corporation of the Local authorities which have been mandated by the Public Health Act to take all necessary and reasonable practical measures for preventing the occurrence of, or for dealing with any outbreak or prevalence of, any infectious communicable or preventable disease to safeguard and promote the public health and to exercise the powers and perform the duties in respect of public health conferred or imposed by the Act or any other law.

Section 105 of the Public health Act (1964) imposes a duty on the Local authority to take measures to prevent any pollution dangerous to health of any water supply that the public has a right to use for drinking or domestic purposes. For the Rwamwanja Settlement project, this act is relevant especially due to the fact that the population is high and 60% of this population is composed of children.

#### **4.2.15 The National Environment (Waste Management) Regulations, 2003**

In the initial stages of the Settlement most of the waste will be biodegradable and can be contained within the Settlement area provided measures for its containment are in place. However, the regulations require waste disposal in a way that would not contaminate the Environment (Water, Soil, and Air) or impact Public health. This particularly refers to onsite waste storage, haulage and final disposal. With respect to the Rwamwanja Settlement, waste will be generated at camp sites, trading centres, schools, health centres and active zones. For these reasons, these regulations are relevant to the Settlement project.

#### **4.2.16 The National Environment (Control of Smoking in Public Places), Regulations 2004**

The National Environment (Control of Smoking in Public Places) Regulations, 2004: - This Act prohibits smoking in Public Places including Working Areas. Project workers (especially at the base camp) need to be reminded about The No Smoking Act to ensure that no smoking in Public Places and those places which have a high fire hazard risk. Under section 3(1) of these Regulations it is stipulated that every person

has the right to a clean and healthy environment and the right to be protected from exposure to second hand smoke. The Regulation under Section 3(2) obliges every person to observe measures to safeguard the health of non-smokers. Under Section 4(1) the Regulation prohibit smoking in enclosed and indoor areas of Public Places including offices, office buildings and work places including individual offices and eating areas. In the Settlement, these regulations will have to be observed at all public areas including offices, schools, hospitals and meeting venues.

#### **4.2.17 The Environment Impact Assessment Regulations,1998**

The Environment Impact Assessment Regulations, 1998: -These Regulations provide for the conducting of Environmental Impact Assessments and clearly indicate that no developer shall carry out a project that is mandated to undergo an EIA in line with Schedule Three of the National Environment Act. The Settlement project is among those indicated under Schedule Three of the Act.

#### **4.2.18 The Guidelines for Environmental Impact Assessment in Uganda,**

Environmental Impact assessment Regulations, 1998 provide for implementation of the National environment Act, Cap 153

#### **4.2.19 The Environmental Audit Guidelines for Uganda, 1999**

The National Environment (Audits) Regulations, 2006; These Regulations provides for audits especially at facilities that have been in operation before further development is considered. Although no Audit is indicated for the Rwamwanja project, it will be essential to conduct periodic audits on this project in the future.

#### **4.2.20 The National Environment (Conduct and Certification of Environmental Practitioners) Regulations, 2003 (Under Section107 of the National Environment Act Cap 153)**

Section 16 states that “No person shall conduct an Environmental Impact Assessment or carry out any activity relating to the conduct of an Environmental Impact Study, or Environmental Audit as provided for under the Act, unless that person has been Duly Certified and Registered in accordance with these Regulations.”

### **4.3 Institutional Framework**

The relevant institutions in this Settlement project include the National Environment Management Authority (NEMA), the Local Government especially the District Environment Office at Rwamwanja, the Office of the prime Minister (Disaster

preparedness department), Ministry of Lands, Housing and Urban Development (MLHUD) and Ministry of Water and Environment (MWE) as outlined in the Table 4-1 below:

**Table4.1: Stakeholder Landscape for the Rwamwanja Settlement ESIA Process**

S/NO	Stakeholder	Main Responsibility
<b>Lead Agencies and Government Departments</b>		
1	Department of Disaster preparedness, Office of the Prime Minister	Mandated to plan for and handle all disaster in Uganda including handling refugees, Settlement and Resettlement camps and any other Settlements following an emergency or disaster.
2	National Environment Management Authority (NEMA)	Ensures Environmental Compliance and regulates activities that affect the environment; NEMA and the District Environment Offices will be key in monitoring environmental compliance for the Settlement project during and after the Settlement.
3	Wetland Management Department, Ministry of Water and Environment;	Mandated to manage wetlands and ensure wise use and handling of wetlands within the Settlement as well as within the project area; This Department as Lead Agency will be monitoring the integrity of wetlands during and after Settlement.
4	Department of Museums and Monuments, Ministry of Tourism, Trade and Industry;	Will be responsible as a Lead Agency for artefacts, antiquities and monuments once encountered anywhere within the Settlement and within the overall project area.
5	National Forestry Authority (NFA), Ministry of Water and Environment;	Mandated to manage Protected Forests (Central Forest Reserves) in Uganda.
6	Local Governments of Kamwenge and Kyenjojo (District Environment Officers)	Regular Inspection and ensuring environmental Compliance within the respective Districts;
7	Local Governments of Kamwenge and Kyenjojo (District	Responsible for the management of Forests outside of the Central Forest Reserves such as those within

S/NO	Stakeholder	Main Responsibility
	Forestry Services)	Rwamwanja Settlement area. This department will discuss issues related to management and conservation where forests are impacted upon
8	Directorate of Water Resources Management (DWRM)	Apart from developing and maintaining National Water Laws, DWRM has the responsibility to regulate the quality and quantity of water resources in the country.
9	Uganda Wildlife Authority (UWA)	UWA is a body mandated by the Uganda Wildlife Act, Cap 200 to assume responsibility for Wildlife in Uganda. The Rwamwanja Settlement shares borders with the Katonga Game Reserve.
10	Uganda Land Commission (ULC)	ULC holds and manages Government land in Trust in accordance with the Constitution and the Land Act Cap 227, 1998. The land for the Settlement will be held by this commission in trust on behalf of all Ugandans since it is mandated to handle land that belongs to Government or National Lands such as wetlands.
<b>Ministries and Government Departments</b>		
11	Ministry of Water and Environment	Responsible for the environmental concerns including wetlands, water bodies and Natural resources;
12	Department of Forestry Support Services;	Responsible for policy formulation and planning, inspection, monitoring and coordination of forestry policies.
13	Ministry of Agriculture, Animal Industry and fisheries (MAAIF)	The main stay of the Settlement will be agriculture. This Ministry will be required to monitor agricultural practices and production across the entire Settlement.
14	Department of Meteorology and Climate Change Unit	The Settlement will need to be climate proofed using information on climate and climate change provided by the relevant Government Institution.
<b>Communities</b>		
15	Local communities	These are often the directly affected persons outside of the Settlement. These are the host communities to the camp.
16	Refugee Community	The will bear the brunt of any activities

S/NO	Stakeholder	Main Responsibility
		within the Settlement area.
17	UNHCR	This is the United nations organisation mandated to handle refugees globally and it will have a key interest in the operations and management of this Settlement area.
18	UNEP	Will have a major interest in the environmental concerns within the Settlement and beyond.
	<b>Non Governmental Organisation&amp; Inter Governmental Organisations</b>	
19	NGOs	There are a number of NGOs, IGOs as well as GOs working in the project area. These have an important role to play.

#### 4.4 International Agreements (relevant to the project and environment)

Uganda is a signatory to a number of International Agreements which are relevant to supporting the National efforts in environmental management including the welfare of communities. They are relevant to the Settlement project provided they support or are in consonance with the applicable Laws and Regulations in Uganda. The sections below describe some of these agreements/conventions.

##### 4.4.1 The Convention of Biological Diversity (CBD)

The aim of the CBD is to effect international cooperation in the conservation of biological diversity and to promote the sustainable use of living natural resources worldwide. It also aims to bring about the sharing of the benefits arising from the utilisation of natural resources. Moreover the Convention on Biological Diversity (CBD) encompasses the COP 10 updated Global Strategy for Plant Conservation (GSPC) 2011-2020 which sets targets to halt the current and continuing loss of biodiversity. Parties to this convention are required to undertake EIA for projects likely to have significant adverse effects on biodiversity and develop national plans and programs for conservation and sustainable use of bio diversity.

##### 4.4.2 UNESCO World Heritage Convention, 1972

In the international arena, the legal regime regarding cultural heritage basically emanates from the UNESCO World Heritage Convention, 1972. The convention is concerned with the protection of the world cultural and natural heritage. This convention gives the basis of recommendations developed by experts to conserve cultural heritage. Uganda, the country within which the Hoima Butiaba Wanseko

Settlement is to be constructed, is a member of UNESCO and as such is bound by the recommendation made by the convention in the protection of cultural heritage.

#### **4.4.3 The African Convention on the Conservation of Nature and Natural Resources, 1968**

The contracting states to this Convention are required to undertake / to adopt measures to ensure conservation, utilization and development of soil, water, flora and fauna resources in accordance with scientific principles and with due regard to the best interest of the people. The States are also required to ensure that the conservation and management of natural resources are treated as an integral part of National and /or Regional Development Plans. In addition during the formulation of all development plans, full consideration is required to be given to ecological, as well as to economic and social factors.

#### **4.4.4 The United Nations Framework Convention on Climate Change (UNFCCC), 1992**

The United Nations Framework Convention on Climate Change (UNFCCC) is relevant to the project due to the likely impacts to forests which will be removing the carbon sink and increasing the green House gas emissions (either through deforestation or bush burning). The ultimate objective of the Convention is to stabilise the greenhouse gases concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system of the world. The Framework does not have legally binding measures to contain GHG emissions. The Kyoto Protocol is the one whose focus is to decrease carbon dioxide emissions. It establishes emission – related targets for G -77 Countries as listed in Annex 1 of the Convention. There are three instruments through which Annex 1 Parties (which are the Developed Countries) may indirectly reduce their greenhouse gas emissions which are : -

- Emission Trading;
- Joint Implementation (JI); and
- The Clean Development Mechanism (CDM)

#### **4.4.5 Convention for the Safeguarding of the Intangible Cultural Heritage, 2003**

The Convention for the strengthening of the Intangible Cultural Heritage (2003) calls on States that have ratified it to Safeguard Living Heritage on their own territories and in cooperation with others. It seeks to celebrate and safeguard the intangible heritage distinctive for particular communities. The Convention affirms that the

intangible heritage of all communities – whether they are large or small, dominant or non dominant – deserve respect.

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

The Rwamwanja Settlement Project therefore will be required not to disrupt the Living Heritage but will be expected to safeguard it so that it can ensure that the heritage where it exists continues to be practiced and transmitted within the community or group concerned. Communities should be actively involved in safeguarding and managing their Living Heritage, since it is only they who can consolidate its present and ensure its future.

#### **4.4.6 Convention on International Trade in Endangered Species of Fauna and Flora (CITES)**

Uganda is a signatory to CITES and this convention is relevant to the project area because of its close proximity to a protected area. The Katonga Game Reserve is home to wildlife some of which is listed under endangered species of Fauna and flora.

#### **4.5 Environment in a humanitarian context of mass population displacement**

UNHCR, established in 1950, has a long experience in dealing with population displacement all over the world. Disasters and conflicts can impact the environment in ways that threaten human life, health, livelihoods and security. Since the eighties of the last century UNHCR tried to tackle the manifold environmental issues related to humanitarian crises in a varying socio-economic, cultural and environmental context. Many case studies have been well documented and an environmental policy has been elaborated including the UNHCR Environmental Guidelines (2005), a frame toolkit (UNHCR/Care International 2009), and numerous handbooks on specific topics e.g. livelihoods, forestry, domestic energy, livestock, agriculture have been elaborated. Nonetheless, environmental issues are often overlooked in the emergency phase since the focus is on lifesaving activities. Therefore, the challenge remains high to address appropriately and in a timely manner environmental issues in humanitarian crisis. In addition, since settlements fall between humanitarian aid and

development considerations, the interest and support of international agencies and donors beyond the emergency phase is usually very low.

Many decisions made in camp and settlement management during the emergency phase have an environmental component which may lead to long lasting impacts on the ecosystems of the site and its surroundings and thereby on the livelihoods of the host community (see UNEP 2006). Nearby national heritages may be affected adversely as well. The later environmental mitigations measures are implemented in camp and settlement management, the later the costs for the rehabilitation of the degraded ecosystems will increase.

The site selection for hosting refugees or internally displaced persons (IDPs) widely defines the magnitude of the environmental impact. Many sites have been used intensively by the local communities prior to the arrival of the refugees. The additional needs of refugees and IDPs for natural resources including water, firewood and construction poles/sticks, agricultural land and pasture (if relevant) put an additional burden on the local ecosystems thereby often overstressing their carrying capacity. The negative environmental impact depends on the total number of refugees/IDPs, their needs and length of stay. The latter is often strongly underestimated: according to UNHCR, refugees stay in average around ten years in camps!

The vulnerability of ecosystems is highly varying depending mainly on topography, climate and former use of the natural resources in the area by the local communities. Semi-arid and arid ecosystems are particularly sensitive to disturbances and environmental impacts will be long-lasting and very difficult to reverse at high costs.

In view of the manifold and complex environmental dimensions of humanitarian crisis, environmental issues have to be addressed timely and comprehensively in order to avoid long-lasting impacts on the ecosystems and the livelihoods of the host communities. Since refugees/IDPs are using the same local natural resources, the risk of overexploitation of the increasing scarce natural resources is imminent what may result in conflicts between host community and refugees/IDPs. Therefore both communities should be closely involved from the very beginning in the elaboration of an environmental management plan and its implementation.

## **5 EXISTING ENVIRONMENTAL AND SOCIAL ECONOMIC CONDITIONS WITHIN THE PROJECT AREA**

This section describes the baseline environmental scenario within the Rwamwanja project area covering the District of Kamwenge and some of the impacted

neighbouring districts especially Kyenjojo and Kyegegwa. The baseline information is based on both a review of the available secondary information and findings from the reconnaissance / scoping visits which were conducted from 8<sup>th</sup> November 2012 to 10<sup>th</sup> November 2012 and the field investigations during the EISA from 26<sup>th</sup> November to 3<sup>rd</sup> December 2012. Information was also obtained from consultation meetings with the Political Leaders, the Districts' Technical Personnel / Authorities (Kamwenge District).

The following Paragraphs describe the biophysical environment (including aspects of agricultural activities) as observed /assessed in more detail: -

### 5.1 Project Local Area

As stated before, Rwamwanja Settlement is situated in Nkoma and Bwizi Sub counties and borders with Katonga Game Reserve within Kamwenge district. Kamwenge District shares borders with the Districts of Kyenjojo in the East, Kabarole in the West, Kibale and Kyenjojo in the North and Mbarara in the South as shown in Fig 3.1 above. An overview of the project area is shown in Fig 5.1 Below.

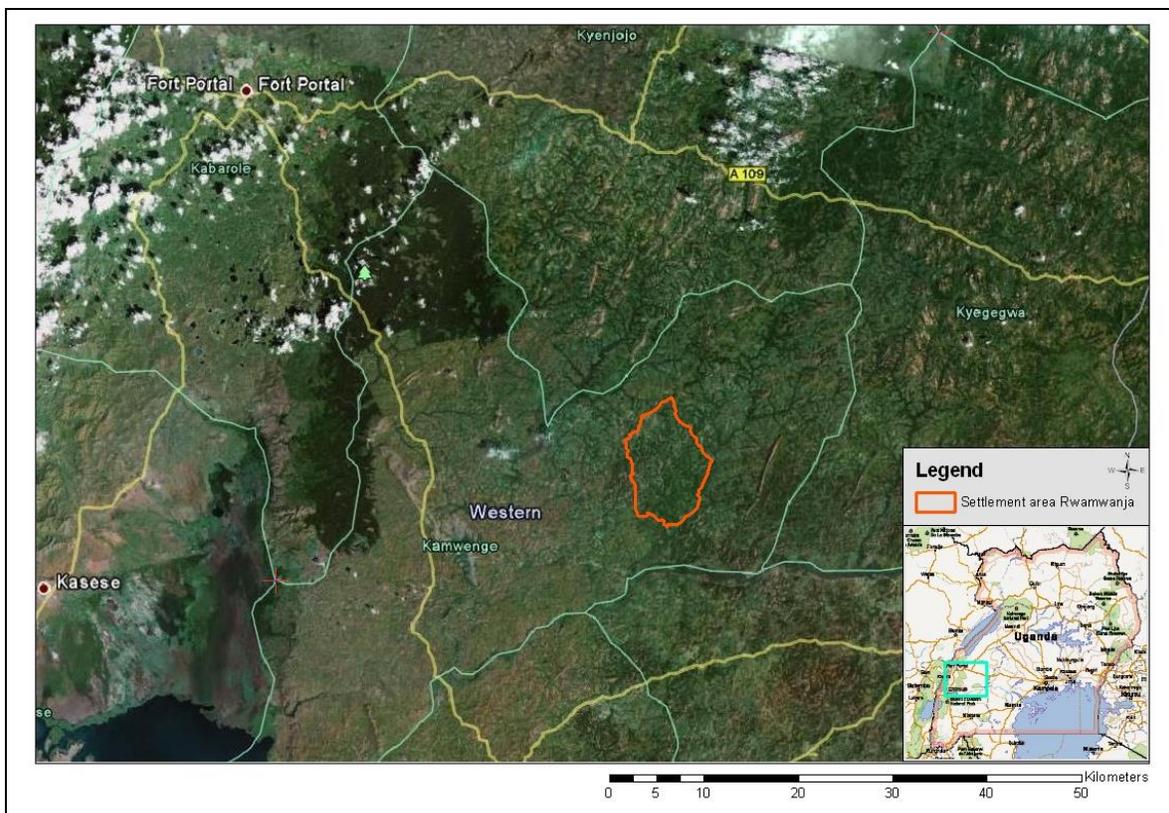


Fig 5-1: The Map showing an overview of the project area

### 5.2 Physical Environment

### **5.2.1 Physical Status of the Project Area**

The project area is within hilly terrain with many small but seasonal wetlands. It is mostly an agricultural country with limited or no industrial activities. The general area is of low-sensitivity environmental settings (slopes are all less than 30%, and most of the flora and fauna are not endangered). The Settlements are scattered.

### **5.2.2 Topography and Geomorphology**

The landscape of Kamwenge District is representative of the Wayland's Penplain II and is part of landforms that trace their origins to the end of the Tertiary period. The landscape has a thick layer of laterite. There are remnants of this old laterized surfaces outcrop to the surface on hill summits in Kamwenge and further east. Gently undulating hills are the predominant landform of Rwamwanja. In terms of elevation, the project area lies within about 1150m above sea level to about 1250 m.

### **5.2.3 Geology and Soils**

Kamwenge district is underlain by Pre-cambrian rocks which can be divided into three types. There are wholly granitized or high to medium metamorphic formations which include quartzite in most of that region.

### **5.2.4 Hydrology and Water Resources**

The underlying rock structures normally determine the drainage system. In Kamwenge and neighbouring areas districts, pre-cambrian rock structures have been greatly modified by tectonic earth movements associated with formation of the Western Rift Valley. These processes eventually led to formation of Lake George and numerous crater lakes and rivers that control the drainage of the entire sub-region. The drainage system for most of the project zone ( that covers the Districts of Kamwenge, Kasese, Ibanda, parts of Kyenjojo, and parts of Kyegegwa) is controlled by River Mpanga and Dura. However for Rwamwanja, the drainage system changes and the small streams lead into the Katonga River which eventually drains into Lake Victoria. Katonga River is surrounded by an extensive wetland choked with papyrus which is also the boundary to the eastern side of the Rwamwanja Settlement. Within Rwamwanja, there are mostly seasonal swamps and rivers as the area is water stressed.

### **5.2.5 Climate**

The climatic conditions of the Western part of Uganda including the Rwamwanja zone are determined by the Congo air mass as well as the dominant prevailing

easterlies. These provide for increased variability in rainfall from year to year. On the other hand the effects of relief continue to dominate rainfall distribution in the project region. The project zone experiences a double maxima rainfall regime with mean annual rainfall ranging from 800mm-1150 mm based on data from the Department of Meteorology, Uganda. The first rains begin in late March into May and second rains begin in late August to early November sometimes stretching into the month of December during El-Nino years. The nearest rainfall station with a good data set is that of Kasese. Unfortunately the Kasese station is within the rift valley which is drier than Kamwenge District.

#### **5.2.6 Pollution Potential**

The team observed that many of the settlers have the habit of cooking indoors against the advice from the Settlement Authorities. There is considerable burning of biomass for both cooking and brick making. Burning biomass for cooking inside their houses using traditional stoves is also a serious health concern especially for women and children.

Although earlier studies (by Magezi S A K) using old data from the Kasese and Masindi Meteorological Stations showed that Air Pollution Potential (outdoors) is low (VC higher than 600M<sup>2</sup> S<sup>-1</sup> or maximum mixing height (MMH) < 1.0 km) although occasionally, on specific days, the potential can be high. This means that the cooking may not present serious health hazards if done outside as opposed to indoors with little or no ventilation.

#### **5.2.7 Hazardous Materials**

There are no major hazardous materials envisaged in this project. However, an analysis of the lighting habits for the refugee community, showed that over 80% of them use torches for lighting which leads to a large number of batteries. These batteries are part of the hazardous waste that will need to be handled accordingly. Another potential hazardous waste may arise in the future due to use of chemical fertilizers. It is likely that in the long term as the land becomes less productive, and the population increases the refugee community will start to use inorganic fertilizers with their resultant negative impacts which include degradation of the wetlands and water resources.

### **5.3 Biological Environment**

For many people of Kamwenge biodiversity is a matter of survival since their livelihoods depend on free and open access to a great variety of biological resources for food, fuel, medicines, housing materials and economic security. Because the protection of biodiversity is necessary for the maintenance of the biological resource base, it is an integral element and intricately linked in the day to day life activities of

the people of Kamwenge district. The district is well endowed with various species of biological diversity.

### 5.3.1 Kamwenge District

In general, Kamwenge District has a total area of 254.5km<sup>2</sup> of tropical high forest cover representing 10% of the area (ref. NFA). However about 8% of this area falls in the protected area of Kibale National Park. The Savanna woodland covers an area of 271.2km<sup>2</sup> that is about 11% of the area of the district. These woodlands unfortunately are disappearing at a very fast rate due to population increase and expansion of land for agriculture purposes.

Specifically, the following gazetted protected areas are found in the district;

- Kibale protected area, which is 766km<sup>2</sup> and has about 209 km<sup>2</sup> in the north eastern part of the district.
- Kakasi forest reserve, which has 800 hectares that, is found in Kicheche Sub County. Kasyoha – Kitomi tropical high forest overlaps in two other neighbouring districts of Bushenyi and Mbarara. It has a total area of 399km<sup>2</sup>. It is composed of a medium altitude most semi deciduous forest rich in species diversity. It has 5 tree species 11 butterfly's, a water bird species not found in any other Ugandan forest.(Uganda Forestry Nature Conservation Master Plan 2002).
- Other tropical forests constituting about 2% of the district area are found scattered in small enclaves mostly in the valleys but are more dominant in the sub counties of

Rwamwanja Settlement borders with Katonga Game Reserve that measures approximately 211 km<sup>2</sup> (81 sq mi) of savanna, acacia woodlands and a large area of wetlands ( Katonga Primary ecosystem) and is located along the banks of the river Katonga. The reserve protects a network of forest-fringed wetlands along the Katonga River and is home to over forty (40) species of mammals and over one hundred (150) species of birds many of which are specific to wetland habitats. Commonly sighted in the wetland reserve are bohor reedbuck, bushbuck, waterbuck, warthog, as well as elephant, buffaloes, river otters and colobus monkeys. Also found in this habitat is the shy Sitatunga, a semi-aquatic antelope that lives exclusively in swamp areas.

Until recently (1996), zebras are said to have been seen grazing along with cattle on Kabuga hill. The last zebra is said to have been sighted during the training of the local

militia, based at Rukunyu, following the ADF invasion in 1997. (Source: Local leaders and Elders around Kabuga hills). Since then nothing has ever been heard of zebras. Before entering Lake George, River Mpanga as it ascends the Rift Valley escarpment, creates falls forming a gorge. The gorge has a natural forest which falls in Kasyoha /Kitomi block. With encroachment, bush burning and charcoal burning, the inhabiting flora and fauna of especially unique and rare species as apes and herbal plants are endangered.

Otherwise the Settlement is located in a typical savanna landscape on undulating terrain with mostly smooth hills separated by small valleys. The savanna type is a transition from dry to moist savanna (see Langdale-Brown et al. 1964). Tree and shrub cover varies mainly according to soil moisture content and slope angle. Small seasonal ponds and Riverine forests alternate along the valley bottom while Tree savannas and savanna woodlands on varying slope, interspersed with small semi-deciduous thicket clumps, cover most of Rwamwanja. Some of the hilltops have rocky outcrops with open shrub savannas. However, most of this natural vegetation is being cleared for Settlement, agriculture, firewood, charcoal and building materials. In area coverage for different vegetation types within Rwamwanja is shown in Table 5.1 below:

**Table 5.1:** Area coverage for different vegetation types within Rwamwanja Settlement

<b>VEGETATION TYPE</b>	<b>AREA (ha)</b>	<b>AREA (km2)</b>	<b>Percentage</b>
Savanna woodland	3,333.77	33.34	42.25%
Tree savanna	2,968.08	29.68	37.62%
Shrub savanna on hilltops	93.36	0.93	1.18%
Riverine forests	1,084.90	10.85	13.75%
Wetland	409.75	4.10	5.19%
<b>TOTAL</b>	<b>7,889.85</b>	<b>78.90</b>	<b>100.00%</b>

The following paragraphs describe some of the biological status within RS: -

### 5.3.2 Agriculture within the Settlement

So far all the refugees who have arrived at the Settlement are cultivators and by allocation of land, they are encouraged to continue with their agricultural activities. UNHCR together with other implementing partners like ADRA distributes crop seeds, agricultural equipment and pesticides and ensure support services all to benefit the Settlement Agriculture.

Based on what local people get used to cultivate, different crops are proposed to the refugees who have to choose which ones they want. The most cultivated crops are maize, cassava, beans, groundnut and sweet potatoes, which are often in association. Banana trees and sugar cane can also be found in agricultural plots, which were before cultivated by local farmers. It is also possible to find small areas of land cultivated with market garden crops such as onion, cabbage and tomatoes using compost (garden pilot projects of ADRA). Some refugees, who aren't farmers or who don't get used to cultivate local crops, have problems to cultivate their land in a proper manner.

Very few domestic animals have been noticed during the field survey within the settlement area, but it is likely that after the first harvest, the refugees will invest in buying livestock as an important form of social security. At the time of the survey no information was available about possible future programs of implementing partners, which aim to distribute or promote livestock to the refugees.

Although most of the agricultural land within the settlement area doesn't exceed 30% slope and no erosion forms have been yet noticed, soil conservation techniques are necessary to avoid erosion and fertility losses. At the moment of the EIA field survey nobody was cultivating using this kind of techniques.

### **5.3.3 Vegetation Description**

Kamwenge district shares the Albertine Rift Area of Regional Endemism. The district is endowed with; numerous wetlands in almost all valleys, tropical forests of Kasyoha- Kitomi, Kibale and pockets of high tropical forests of Bwizi. The area is endowed with numerous woodlands, and aquatic systems of Lake George and River Dura, the Protected Areas of Katonga- to the East, Kibale to the North, Queen Elizabeth National Park in the West and Kyambura Game Reserve Southwards.

Within the RS, the main forests are along the Riverine areas and close to wetlands. The rest is mostly savanna and thickets as described below.

#### **5.3.3.1 Riverine Forests**

Riverine forests (Fig 5-2) occur along seasonal streams and wetlands. The vertical structure is composed of many layers with a total vegetation cover varying between 50 and 90%. Dominant trees reach a height of 15-20 (25) m, including *Albizia glaberrima* var. *glaberrima*, *Neoboutonia macrocalyx*, *Phoenix reclinata* (African wild date palm) and more sporadically *Sterculia dawei*. *Erythrina abyssinica* and *Macaranga kilimandscharica* are often present in the mid-layer. The herbaceous layer is mainly composed of *Aframomum* sp. and different species of sedges (*Cyperus* spp., *Mariscus*

spp.) and may be locally dense where the tree canopy is open. The soils are deep organic hydromorphic soils with an average slope of less than 5 %. The conservation value of wetlands is generally high due to the rich biodiversity and the protection function for the aquifers.



**Fig 5.2** Riverine forest along a seasonal stream within the Settlement

### **5.3.3.2 Shrub Savanna on Rocky outcrops / hills**

Some of the steeper hills (slope angle more than 30%) have rocky outcrops with characteristic vegetation. The shrub savanna on hill tops covers about 0.93Km<sup>2</sup> which is only 1.18% of the total area. The shrub cover is usually less than 10% including *Entada abyssinica*, *Harungana madagascariensis* and *Schrebera alata* growing between quartzite boulders which provide a certain fire protection thanks to the absence of grasses(**Fig 5.3**). The cover of the grass layer is in average about 80% depending on the abundance of surface quartzite. Dominant grass species are *Cymbopogon nardus*, *Hyparrhenia* spp. and *Themeda triandra*. Sporadically, *Aloe volkensii*, an IUCN red list

species (Least Concern) may occur (**Fig 5.4**). This aloe figures also in Appendix II of the CITES list. The soil type is Leptosol according to the FAO classification.



**Fig. 5.3** Shrub savanna on rocky quartzite boulders with *Entada abyssinica* (upper left corner) and *Harungana madagascariensis* (lower left corner).



**Fig 5.4:** *Aloe volkensis* on rocky hillside, an IUCN red list species.

### 5.3.3.3 Woody Savanna

This vegetation, including savanna woodlands and tree savannas, widely dominates and covers about 80% of Rwamwanja Settlement. **Savanna woodlands** have a canopy cover of above 30% while **tree savannas** have a canopy between 10 and 30% (**Fig 5.5**). Tree height is about 7-15 m and may reach up to 20 m (*Acacia abyssinica* subsp. *abyssinica*). Tree canopy cover depends mainly on soil and anthropogenic factors. The dominant trees in the woody savanna are *Acacia abyssinica* subsp. *abyssinica* (*Umunyinya*, mostly on slope), *A. sieberiana* (*Umunyinya*, mostly on flat terrain), *Albizia adianthifolia* (*umusisa*, *umusebeya*), *Combretum molle* (*umurama*), *Croton macrostachyus*, *Ficus thonningii* (*kivumi*), *Polyscias fulva*, *Sapium ellipticum* (*umusasa*). Dominant shrubs are *Acacia hockii* and *Lantana camara* and may be locally abundant as well as the shrubby plant *Asparagus flagellaris*. The continuous grass layer is mostly composed of *Brachiaria decumbens*, *Panicum maximum*, *Sporobolus pyramidalis*. The soils are ferrallitic, mainly sandy clay loams, whose depth depends mostly on the relief. The average slope is around 10-30%.



**Fig.5.5:** Savanna woodland with a tree canopy cover of over 30%.

#### 5.3.3.4 Thicket Clumps

Small dense semi-deciduous thicket clumps (woody patches) are scattered in the tree and savanna woodland and are a typical feature of this savanna landscape (see Bloesch 2002) (**Fig 5.6**). Thicket clumps are mostly located on flat terrain and gentle slope and have a diameter of up to 30 m. The thickets are almost impenetrable, composed of many much-branched, often armed trees and shrubs, thickly interlaced with climbers (e.g. *Abrus precatorius* subsp. *africanus*) forming a canopy cover of over 80%; the herbaceous layer is very sparse. The height of the trees may reach 10 (15) m mostly with one single tree which dominates such as *Albizia adianthifolia* or *Combretum molle*. These nucleus species, often on a termite mound, play a pivotal role in the genesis and development of thicket clumps. Other frequent tree and shrub species include *Allophylus abyssinicus*, *Flueggea virosa*, *Grewia* spp., *Macaranga kilimandscharica* and *Rhus natalensis*. Fires enter at the outmost only a few meters in the thicket thereby contributing to the formation of the sharp boundary (ecotone) with the surrounding open savanna



**Fig.5.6:** Small dense semi-deciduous thicket clump with *Albizia adianthifolia* as dominant tree.

#### 5.3.4 Wetlands

Numerous small seasonal water ponds occur within the area. Continuous wetland occurs along the stream bordering Katonga Game Reserve (**Fig 5.7**). The wetlands bordering the Settlement such as the Katonga tributary are composed mainly of papyrus (*Cyperus papyrus*) and several sedges and of many perennial forbs tolerating strongly alternating soil moisture content. The soils are deep organic hydromorphic soils on flat terrain. It is important to acknowledge that the conservation value of wetlands is generally high due to the rich biodiversity and the protection function for the aquifers.



**Fig 5.7:** This wetland separates Rwamwanja Settlement and the Katonga Game Reserve (notice a farm across the wetland within the Katonga Game Reserve!)

#### 5.4 Socioeconomic and Cultural Environment (Sociologist, UNHCR)

This section outlines the overall set up regarding the social, economic and cultural environment. This is necessary because an understanding of these parameters is a prerequisite for analyzing the benefits, threats and relevant mitigation options for the Rwamwanja Refugee Settlement Project.

##### 5.4.1 Administrative Units

The Settlement is within Bwiza and Nkoma Sub Counties of Kamwenge District. The likely impacts will spread across a number of nearby districts due to the potential mobility of the refugees as well as the evicted host community. Kamwenge District has a total of nine sub counties as shown under Table 5.2 below.

**Table 5.2: The Sub Counties of Kamwenge District (The Sub Counties within RS highlighted in yellow)**

S/No	District	Sub County
1	Kamwenge District	Bwizi Sub County
		Kahunge Sub County
		Kamwenge Sub County
		Kamwenge Town Council
		Nkoma Sub County
		Kicheche Sub County
		Mahyoro Sub County
		Ntara Sub County
		Nyabani Sub County

It is imperative that the Settlement operates within the established Local Government Units (at both Districts Headquarters and Sub county levels) within the project area to ensure smooth operations and a sense of acceptance of the refugees by both the host community and the Local Governments. Although this process has already been initiated by the EIA team through briefing sessions as well as consultations to some of the key stakeholders, evidence on the ground shows that there is still more to do to improve the relationship between the Refugee Settlement and the Kamwenge District Headquarters. The Deputy Chief Administrative Officer for Kamwenge district feels that the district management is not well briefed about the happenings at the refugee Settlement.

## 5.4.2 Population

The Population and Housing statistics provide a reasonable estimate for the population figures within Kamwenge up to the year 2012. However the figures for Nkoma and Bwizi Sub counties are likely to be an underestimate due to the arrival of large numbers of refugees during the year 2012. Otherwise the different Sub counties and parishes together with their populations are shown in Table 5.3 below. The directly affected Sub counties are Bwiizi and Nkoma where the population dynamics are changing rapidly.

**Table 5.3: Population Distribution projections in the Directly Affected Sub Counties of Bwiizi and Nkoma (2008 compared to 2012)**

District	County	Sub County	Parish	Male	Female	Total	Male	Female	Total
Kamwenge	Kibaale		Year	2008			2012		
		Bwizi	Biguli	5,200	5,300	10,500	5,700	5,900	11,000
			Bwizi	3,300	3,600	6,900	3,700	3,900	7,600
			Marere	2,000	2,300	4,300	2,300	2,500	4,800
			Ntonwa	3,600	4,000	7,600	3,900	4,300	8,200
		Nkoma	Bihanga	3,000	3,200	6,200	3,400	3,600	7,000
			Bisozi	3,900	4,100	8,000	4,300	4,500	8,800
			Kabingo	3,300	3,700	7,000	3,600	4,000	7,600
			Mabaale	4,200	4,700	8,900	4,600	5,100	9,700
			Nkoma	3,500	3,600	7,100	3,900	3,900	7,800
			<b>Totals</b>		<b>32,000</b>	<b>34,500</b>	<b>66,500</b>	<b>35,400</b>	<b>37,700</b>

Source: Population and Housing Census estimates by UBOS

From the Table 5.3, it was estimated that the affected population within the directly affected Sub Counties would by 2012 be 72,500 having grown from an estimated 66,500 in 2008. Out of the 2012 population of 72,500 people, 35,400 are females while 37,700 are men. It is important to note however that since April 2012, almost 30,000 refugees have come in to Nkoma and Bwizi Sub Counties. If it can be assumed that the total number of the nationals who were displaced by the incoming refugees were about 20,000 (figure quoted by the Kamwenge LCV Chairperson), the total population would still have been about 92,500. It was reported that 60% of the incoming refugees are children while up to 25% of the refugees are women and youth. Men are a minority at about 15% (see fig 5.8).

Fig: 5.8: Figures showing the high number of children and women within the Settlement.



Fig 5.8: It is children and women in most places, most of the refugee women are also visibly expectant and each has an infant she is care taking.

This population profile has major implications in the near future as the young people grow to practice their reproductive roles and also to meet their daily subsistence needs.

### 5.4.3 Ethnic Composition and Cultural Set Up

The dominant ethnic compositions in Kamwenge district are the indigenous Batagwenda and Batoro as well as the newly settled Bakiga, Bahima, and Banyankore. Rwamwanja became a refugee Settlement in 1962/64 and all the refugees were of Rwanda origin who all left the Settlement in 1994. Today the refugees who came in April 2012 are all Congolese but of mixed ethnicities. The majority are Congolese of Rwandese origin (mostly Hutu and a few Tutsi Congolese). While the host community had learnt to live in harmony with no apparent conflict, the refugees are bound together by the refugee status they find themselves in. Until recently there were no Congolese in the project area and the entire project area had been resettled by the local tribes surrounding Kamwenge. No records were available to classify these re-settlers and no records have been made to indicate the new places they may have settled in. There are some indications that some of them might have settled in the nearby Katonga Game Reserve.

#### 5.4.4 Health

Kamwenge District does not have a single referral hospital and the highest levels of healthcare provider are two health centre IVs. Within the Settlement, there is only one health centre III which is congested catering for up to about 60,000 people (taking into account both the refugee population as well as the host community). To alleviate the situation there are two outreach clinics where the refugees can go for help. The *Medicins sans Frontiers* (MSF) operate mobile clinics to assist the refugee community. These are organized as follows (Table 5.4): -

Table 5.4: programm for Outreach clinics in RS

S/No	Location	Day of week	Time
1	Kyempango B	Tuesday	8:30am to 3:00pm
2	Health centre Rwamwanja	Wednesday	8:30am to 3:00pm
3	St Michael P S	Thursday	8:30am to 3:00pm
4	Mahani	Friday	8:30am to 3:00pm

Source: Findings from Field work

Due to the pressure on the health faculties, the indigenous believe that they are less welcome to the health facility compared to the refugee community. Hence there is a need to upgrade the health facility to Health Centre IV status with more outreach clinics such as Health Centre IIs and Health Centre Is.

#### 5.4.5 Morbidity

Consultations have indicated that the death rate among children within the Settlement is high with up to three children dying daily. The reproduction rate is also high. The most common causes of death among the children include the following: -

- Malaria
- Dysentery
- Respiratory Tract infections
- Malnourishment

Although this is yet to be manifested, the tendency to cook by burning biomass in restricted small shelters using traditional cooking stoves may be an additional risk to the health and well being of the settlers. This will increase on the morbidity burden.

An understanding of the morbidity will inform the preparation for managing clinical cases for both the refugees and the host community.

#### **5.4.6 Family Planning**

Investigations show that family planning awareness is low among the refugees. Nevertheless the HIV/AIDS prevalence is lower (about 1%) for refugees compared to the host community (estimated at about 7%). An understanding of the family planning awareness will feed into the way the health services stocking their facilities.

#### **5.4.7 Water use**

**Domestic Water:** The Environmental Impact Assessment was conducted during the rain season when water seems to have been available at seasonal springs. Otherwise the project area is a water stressed area with almost no water during the dry season.

Nevertheless, the first mission report for the UNHCR (5th June 2012) reported a total population of 18,465 persons in Rwamwanja among them 9,763 refugees. At that time, there were 7 functional water points, including 3 shallow wells, 3 boreholes and a protected spring with two outlet pipes. It was also reported that there were 6 non-functional wells in various villages that were in urgent need of rehabilitation to restore their functionality.

Now at the time of conducting the ESIA there was an estimated population of refugees of 28,287 by 16<sup>th</sup> November 2012 served by 38 boreholes that are functional. In addition, 16 more are planned to be dug. The average depth of the boreholes is around 40-50 meters ranging between 30 and 100 meters and their average yield is approximately of 1.5 m<sup>3</sup> per hour. These boreholes are currently used by both refugees and the local population.

A wash-expert of UNHCR together with OPM work out the sites selection, but no special hydro geological study has been carried out and for the time being some water quality analysis has been carried out by AAHI for the existing boreholes. It is also planned to organize comprehensive water quality analysis for the new boreholes.

Human Settlements, including poor location of latrines, being located too close to open streams or over unconfined aquifers can cause a contamination of water resources. To avoid this, human Settlements have to respect a 50 meters buffer zone

around streams and wetland ecosystems. Latrines should be dug downstream of wells and should be at least 30 meters from any groundwater source and at least 1.5 meters above the maximum water table.

To ensure that no borehole is drilled through unconfined aquifers and to estimate their sustainable pumping capacity, an adequate hydro geological survey should also be done. An overuse of aquifers can quickly results in making boreholes or wells useless.

The Functional boreholes were constructed in such a way that the longest distance from a settler to the water source is at maximum 1 km. On the other hand, some people continue to use unsafe water from ponds / pools within some of the valleys in the area (Fig 5.9).

Fig 5.9: Water sources within the Settlement



The current population, unlike the previous refugee population are cultivators and have not accumulated a lot of livestock requiring large volumes of water. At the moment there livestock have to compete with humans for water at the ponds and protected watering points. There are no separate watering areas designated for livestock especially for the dry season.

#### 5.4.8 Sanitation

The sanitation situation is in a poor status. Many of the refugees are just about to construct pit latrines and majority do not seem to have any. It was reported that the household latrine coverage was extremely low due to i) a lack of sufficient sanitation tools for the community to excavate pits for their household latrines, ii) the tree cutting restrictions by OPM, and iii) the refugees had difficulties to find alternative construction materials for their household latrine floors.

The new arriving refugees are overstressed and the construction of shelters and the crop plantation often override the construction of latrines. This may also explain the very shallow latrines (less than two meters deep). On the other hand, another reason for the shallow latrines was reported to be cultural. It was reported that the practice in Congo was to construct a 2-metre deep pit as opposed to the Uganda standard of at least a 4-metre deep pit. Many of these refugees are not comfortable with a deep pit, yet the Settlement managers insist that a 4-metre deep pit is the standard. There is a need therefore to sensitise the refugee community about sanitation and its benefits.

#### 5.4.9 Education

The number of school going children is overwhelming considering that 60% of the population is composed of children. Currently there are only two schools within the Settlement one of which is fully operational (Rwamwanja Primary School) while the second one is registering potential pupils (St Michael's Primary School). The population in each of these schools is over 2000 pupils and it is clear that the schools are oversubscribed. In addition the UNICEF, World Vision and OXFAM have put in place several child care centres which at the time of the survey looked under utilized. Rwamwanja Primary School is used by both the host community as well as the refugees. In a way this has put a lot of strain on facilities which were originally used by the host community.

A Comparison between Refugee status and number of children attending school in Rwamwanja Refugee Settlement versus the host community has been done. This is shown in Table 5.5 below.

Table 5.5: Comparison between Refugee status and number of children attending school in Rwamwanja Refugee Settlement

Characteristic	National N (%)	Refugees N (%)
Children attending school (N=167)	98(58.7)	69(41.3)
1-4 Children	62(49.6)	63(50.4)
5-9 Children	34(87.2)	5(12.8)
10+ Children	2(66.7)	1(33.3)

Source: Field data, 2012

The results indicate that the host community had majority of their children attending school (58.7%) unlike their counterparts the refugees (41.3%). Results further reveal

that among the refugee community, a higher proportion (50.4%) of them were better at educating smaller families (1-4 children). Overall the host community are more determined to educate their children even if the family sizes are big. It will be necessary to increase the number of class rooms to accommodate the high numbers of school going children for both the host community as well as for the refugees.

#### **5.4.10 Former land use**

According to the narrations from elders within the Project area Rwamwanja was used as hunting grounds for the King of Toro Kingdom (Rukira Abasaija Entale ya Toro). It was under populated and by the early sixties the King started attracting people from the region (especially Kigezi) to come and populate the area. In 1962, when the Banyarwanda crisis arose, the King (king Rukidi the Second) gave Rwamwanja to settle Banyarwanda refugees escaping from persecution in their home country Rwanda. Prior to the arrival of the Rwandan refugees, Rwamwanja was sparsely populated of approximately about 60 households. The surrounding area was rich in wildlife including elephants, buffaloes, lions and leopards and that is why it was a famous hunting area for the nobility of the Toro Kingdom. Following the Settlement of the Banyarwanda in 1962, the area and its surroundings was mainly used a rangeland by the Rwandese since most of them were of the Tutsi tribe who are cattlekeepers. With time many of the refugees started to grow plantain (Matoke) and beans. By 1994 when the Rwandese left the area, the place was mostly degraded due to overgrazing, and the Settlement occupants had moved beyond the boundary of the gazetted Settlement while some nationals had moved into the gazetted Settlement.

After the Rwandese left in 1994, the natural vegetation quickly regenerated. Wild pigs became very abundant and a threat for the crops of the nationals who had remained in the area. It was reported that the Toro Kingdom advised its subjects to retake their land. In the process many people from neighbouring Districts came and settled and some started commercial farming, dairy and ranching as well as planting forests. Most of the nationals moved into Rwamwanja after 2000 when the land had fully recovered from the degradation.

The mainly pastoral use of Rwamwanja during the last decades and the regular input of manure enriched the soil in organic matter. Presently only some areas show modest signs of bush encroachment with *Acacia hockii* due to formerly intense cattle grazing. Ruderal plants are only locally abundant reflecting agricultural cropping in some areas of Rwanwanja. Ruderal plants include *Bidens pilosa*, *Lantana camara*, *Phytolacca dodecandra*, *Solanum incanum* and *Tagetes minuta*. The grass layer is dense and few spots of bare soils exist (**Fig 5.10 and Fig 5.11**).



**Fig. 5.10:** Riverine Forest along seasonal stream; bare soil on right half of the pictures most probably due to cattle overgrazing/soil compaction near the stream (Google Earth, June 2009).

Currently, the soil fertility is good and crops are growing very well as demonstrated by the current height and vigour of the maize fields of the Congolese refugees (Fig. 5.12).



**Fig.5.11** Modest encroachment of *Acacia hockii* (specimen with yellow flowers at the right margin of the picture) indicating overgrazing

**Fig 5.12:** Productive maize field at Rwamwanja Settlement

#### 5.4.11 Impact of Settlement on land use

In general, the Settlement patterns within the Settlement are controlled such that a refugee is provided a small plot of 100 by 50 metres in size (0.5 of a hectare). Housing for refugees starts with a small reed hut covered with either a plastic sheet or tarpaulin. Then it graduates to a small single mud and wattle/reed house. There are also some indigenous communities which have been left within the Settlement (those that were not evicted). Their households are mostly semi permanent with iron sheet roofing. There are also a few permanent structures especially in the (RGCs) fig 5.13.

**Figure 5.13: Settlement Patterns within the Settlement and surrounding areas.**



Fig 5.13a: A reed hut covered with a plastic sheet, usually the first housing unit for a refugee. Photo taken by S A K Magezi Nov 2012



Fig 5.13b: After some time most refugees graduate to a mud and wattle/reed house. Photo taken by S A K Magezi Nov 2012.



Fig 5.13c: Some of the indigenous people within the Settlement have semi permanent housing with iron sheet roof. Photo taken by S A K Magezi Nov 2012



Fig 5.13d: New Arrivals clearing their plot (50X100m) for housing and Cultivation Photo taken by Dr. Urs Bloesch, Nov 2012

#### 5.4.12 Land Tenure

Although there are some conflicts, it was reported that the entire Rwamwanja Settlement is gazetted as Government property. Under these circumstances it is kept in trust by the Uganda land Commission for the people of Uganda. On the other hand, the Toro Kingdom also claims that the land is theirs. A few of the Ugandans who involuntarily removed also claim that they have legal land titles for the land within the Settlement and they have gone to court to prove so.

This is a matter that should be investigated further (within the limits of sub-judice). Within the Settlement, there will be no selling of land since the refugee is temporarily

given the land. Outside of the Settlement, ownership of land may be transferred either through inheritance, direct purchase or gifting.

To the South East of the Settlement, the area is next to the Katonga Game Reserve where that land tenure is Free - Hold and owned by the Uganda wildlife Authority (UWA).

#### 5.4.13 Economic Activities

The dominant economic activity within Kamwenge District is subsistence agriculture. Within the Settlement, all the refugees are cultivators. Within the surrounding parishes, mixed agriculture is practiced with some people practicing livestock rearing, while others do agriculture (fig 5.14). The refugees have started to sell some of their products and a few are selling some of the relief items as seen from the weekly market.

**Figure 5.14: Some of the Land Use Activities in Rwamwanja**



Fig 5.14a: Potato plantations in foreground and Pine trees left by an evicted Ugandan in the background Picture taken by S A K Magezi Nov 12



Fig 5.14b: Intensive organic agriculture at some demonstration plots in the Settlement Picture taken by S A K Magezi Nov 12



Fig 5.14c: Agricultural fields across the entire landscape. Picture taken by S A K Magezi Nov 12



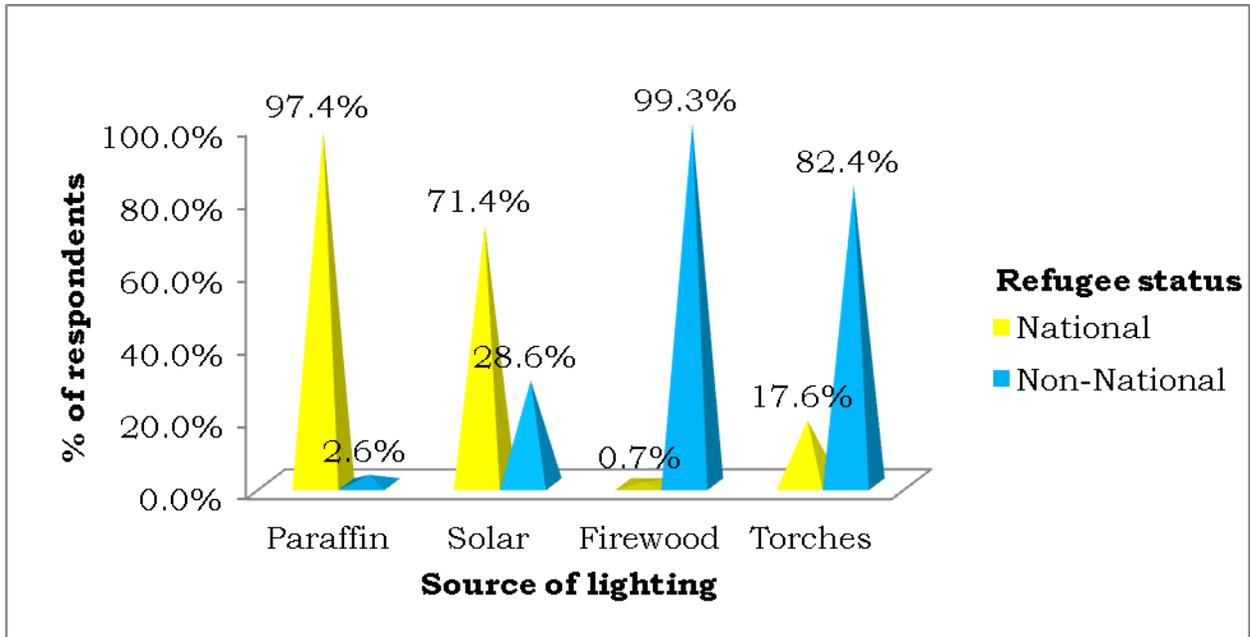
Fig 5.14d: cattle outside of the Settlement on the Kamwenge road. Picture taken by S A K Magezi Nov 2012.

#### 5.4.14 Energy

The main power source for domestic needs in the Settlement and its surrounding is Firewood for cooking. Within the project area, kerosene/paraffin and Firewood continue to be the main source of energy for lighting for most households. There were a few homesteads both within and outside of the Settlement which had solar panels mostly for lighting and charging phones.

With specific reference to lighting, there is a major difference between the host community and the refugee community. The Comparison between Refugee and host community on use of lighting fuel is shown in Fig 5.15below.

**Figure 5.15: Comparison between Refugee and host community regarding the source of lighting in the project area.**



Source: **Field data, 2012**

The above Fig shows that the settling community (Refugees) almost overwhelmingly uses firewood even for lighting with most of them (82.4%) using torches in addition. While the use of Firewood will contribute to depletion of the forest estate, the use of torches will tend to lead to dumping of torch batteries within the environment with negative consequences.

Referring to the refugee community, multiple challenges are associated with the collection, supply and use of fuel for cooking, lighting and heating purposes for the most vulnerable in humanitarian, transitions and development settings. Without safe and dignified access to cooking fuel, not only beneficiaries cannot cook the food they receive, but they may be forced to resort to negative coping mechanisms such as selling or bartering food for fuel, undercooking to save on fuel or venturing in unsafe places to gather wood.

The firewood demand, primarily for cooking, but also for heating water (hygiene) and for lighting is permanently continuous and its impact on the vegetation will be progressively manifested with time. The firewood consumption of the inhabitants of Rwamwanja is expected to be initially relatively high due to the readily available firewood in the vicinity.

In a similar environment where biomass was initially abundant, the daily firewood consumption of Rwandan refugees in the refugee camp of Benaco in Kagera Region in Tanzania in 1994 was about 2.7 kg per person (Bloesch 2001). Two years later, due to the ever-decreasing wood resources in the vicinity of the camp, the use of fuel efficient clay stoves and the application of energy-saving practices, the daily

consumption of firewood per person dropped significantly to 1.6 kg (Owen & Ruzicka 1997).

Initially, dead wood was gathered in the near vicinity of Benaco camp, but with time people would collect and cut wood within a radius of more than 10 km. Woodcutting was selective in the early phase, i.e., people would not cut trees of low fuel quality or trees of cultural significance (*Erythrina abyssinica*) nor trees with large circumferences. However, in the late phase, when firewood became scarce, selective cutting was abandoned in the vicinities of the camps, i.e., even stumps were uprooted, thereby exposing the soil to erosion and endangering soil fertility. An area of more than 500 km<sup>2</sup> had been affected by extensive woodcutting when the 450,000 refugees left the camps after two and a half years in December 1996 (Bloesch 2001).

According to De Montalbert, M.R. & Clements, J. (1983) minimal firewood consumption per person per year lies within a range of 1 m<sup>3</sup> to 1.5 m<sup>3</sup> in developing countries under normal circumstances. During the Rwandan refugee crisis in the Kagera Region in Tanzania, the daily firewood consumption in Tanzanian villages was about 1.9 kg per person.

Many of the Congolese refugees were formerly IDP's in North Kivu. According to Mercy Corps IDP's of the three territories of Goma, Rutshuru and Masisi in North Kivu using traditional food preparation techniques, which typically consist of an open cooking fire ("three stone fire"), consumed about 1.3 kg/person/day (Mercy Corps 2008).

In the Sudanese refugee camps in Upper Nile State in South Sudan, virtually all households are using the open fire system. Average firewood consumption is found to be 1.8 kg/person/day.

Inside burning of biomass with traditional cooking stoves emit large amounts of soot and smoke and are a serious health concern for women and children.

Following a conservative estimation we assume that average firewood consumption of both, refugees and locals, using traditional cooking stoves will be **1.5 kg/person/day** initially.

## **5.5 Potential for enhanced deforestation**

Due to the recent drastic rise in charcoal prices in Kampala the production of charcoal has become very lucrative for many entrepreneurs in the rural areas of Uganda. As in many large cities in Africa charcoal is the primary domestic energy source. The 2009/2010 household survey conducted by the Uganda Bureau of Statistics revealed that 76% of the population in Kampala use charcoal as their main source of fuel for

cooking (The Observer 2012). According to the UN Food and Agriculture Organisation (FAO), between 2000 and 2010, Uganda lost 26% of its forest cover and only 15% of the land area of Uganda remains forested (FAO 2011). Charcoal making is the biggest contributing factor to deforestation. By converting wood into charcoal using traditional earth kilns about 70-80% of the original energy content is lost.

Today, a sack of charcoal costs between Shs 55,000 and Shs 70,000 – up from Shs 30,000 back in 2008 (The Observer 2012). Nearby Kyenjojo, along the Fort Portal – Kampala road, one bag of charcoal is about 15,000 Shs making the transport and selling in Kampala very interesting financially. Lacking other income generating activities the production of charcoal is very attractive for many Congolese refugees although its production is forbidden within Rwamwanja by OPM. Outside the Settlement, charcoal making needs a permit from the Forest Officer. It should be noted that *Acacia spp.*, *Albizia adianthifolia* and *Combretum molle* which are abundant at Rwamwanja produce all charcoal of high quality whose demand in the city is high. Fired brick-making, another potential income generating activity for the Congolese refugees may cause further rapid and severe localised deforestation. This activity has not yet taken off but may soon be a major environmental concern as the refugees become more affluent and want to live in brick houses as opposed to the mud and wattle they have currently.

OPM has started to mark trees with different colours in order to reduce the deforestation within Rwamwanja and to protect socio-economic and ecological important trees.

The meaning of the colours of the marked trees is as follows:

- Red paint: protected trees not to be cut;
- White paint: these trees can be harvested only with permission from OPM;
- Yellow paint: these trees can be harvested.

Although this initiative is very laudable the supervision of the tree marking needs enough manpower and is only promising in the long run if the inhabitants are fully involved in the operation and committed to protect their trees. Not only the leaders of the Refugee Welfare Council need to be engaged in the tree protection but all inhabitants of Rwamwanja organised in well-functional environmental committees. Many of tree marking operations failed in the long run in humanitarian crisis. With increasing length of stay of refugees/IDP, the pressure on the remaining trees in the vicinity of the camp/Settlement will steadily increase and the protection of trees with a high conservation value will become very challenging. This was for example the case in the Rwandan refugee camps in Tanzania in the nineties where finally all trees, including the marked ones, were chopped down (Bloesch 2001).

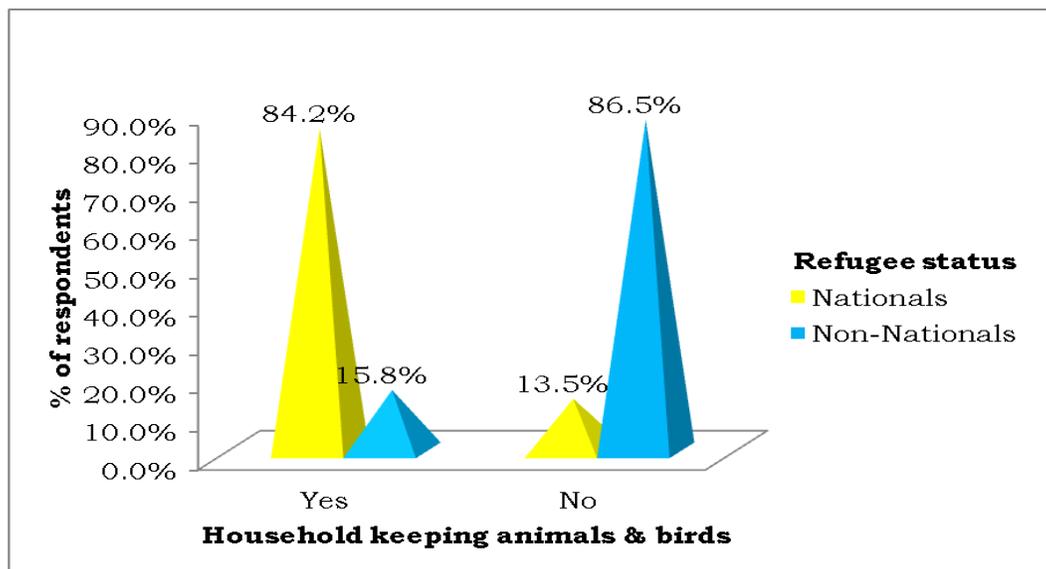
## 5.6 Potential for enhanced poaching due to acquired /adapted Eating Habits and Traditional Delicacies

Among both, the host population and the refugee community, animal protein is one of the preferred foods. This may be got from either livestock / birds or from hunting and gathering. Most of the host community does keep animals and/ or birds to fulfil this demand. The Fig5.16 below shows the proportion of people who keep animals /birds for the purpose. On the other hand the option of bush meat is also available to meet this basic need of animal protein. The analysis has shown that the Congolese community is more inclined to partake of bush meat compared to the host community (See Fig 5.17). Other eating habits of the Congolese include eating of wild birds, a practice not common among the host community. This may impact negatively on the bird population within the project area.

Such practices have serious implications regarding the possible poaching / hunting within the protected areas. According to the Natural Resource Office of Kamwenge increased poaching and overfishing has been recorded.

Besides, there were unconfirmed reports that nationals who were thrown out of the Settlement area ended in the Katonga Game Reserve what will have tremendous impact on the wildlife population, if true.

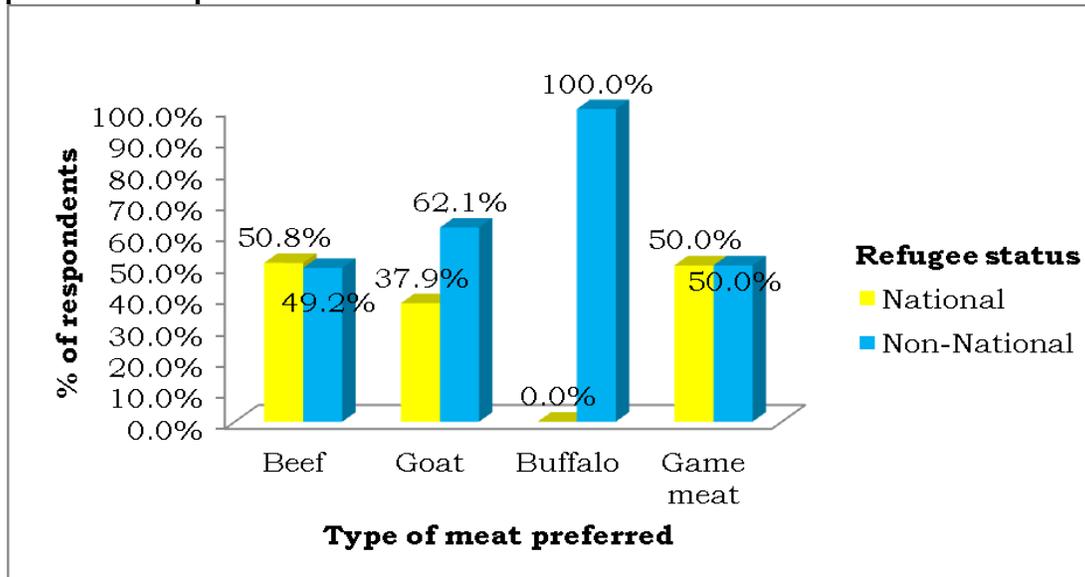
**Fig: 5.16: The proportion of host community and refugees who keep animals and birds.**



Source: **Field data, 2012**

One of the other challenges, the study found that for refugees who keep animals or birds, they stay with them within their small houses. This is true for birds and small animals such as goats and sheep.

**Figure 5.17: The proportion of host community and refugees that prefer different types of animal protein.**

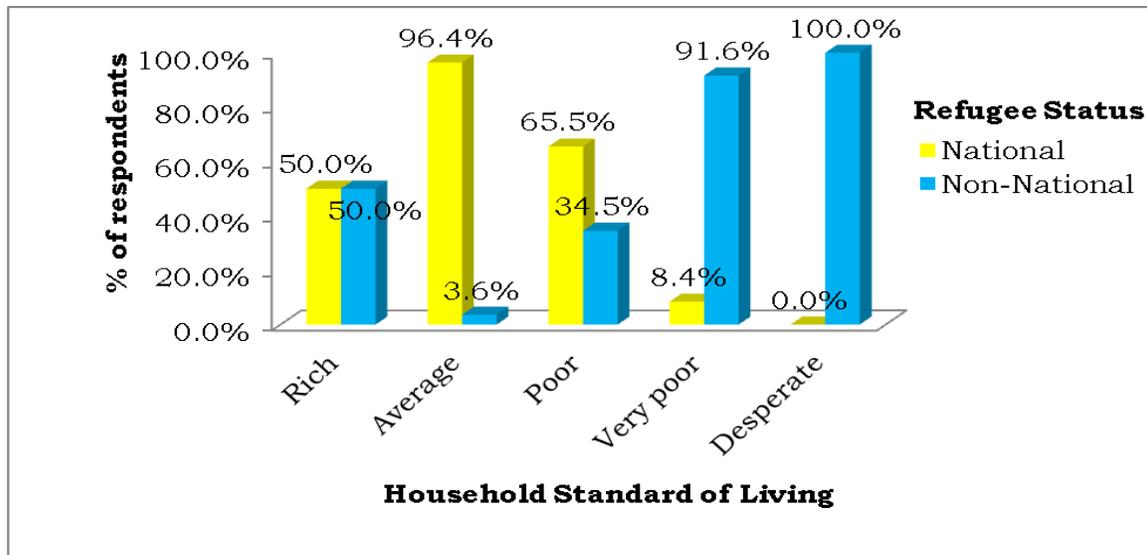


Source: **Field data, 2012**

### 5.7 Cost of Living

A survey studied the standard of living as well as household incomes for the host community as well as the refugees. Overall, both communities were poor with the refugee community being classified as very poor and or even desperate. This comparison is provided in Fig5.18 below.

**Figure 5.18: Comparison between Refugees and Host community household standard of living in Rwamwanja Settlement.**



Source: Field data, 2012

On the comparison between refugees and the host community household standard of living, it can be seen in Figure 5.18 above, that Nationals had a better standard of living unlike the Refugees.

Although the Settlement policy has been to try and improve the incomes of the refugees by giving them jobs in the Settlement, and some of them going out to work for the host community in the neighbourhood, the refugees are having no income yet. The income is needed to meet other needs that can not be met by the generous offer of food ration from the WFP. A comparison between the two communities showed that most (83.8%) in the host community had incomes of about 100,000/= per month yet the refugee community were lucky if their incomes were 50,000/= per month. The level of poverty and desperation among the refugees has negative impacts on the environment as many of them will revert to extracting natural resources to unsustainable levels just to make ends meet. The likely candidate is the burning of charcoal whose price in towns has become very high and attractive as a source of revenue.

## 5.8 Transport and Communication

### 5.8.1 Access and Transport

The Settlement is predominantly rural and the most common transport within the Settlement is head loading and boda boda / cycle transport. There are some overloaded pickup trucks/lorries and Minibuses particularly along the road from Kyenjojo to Kamwenge.

Rwamwanja may be accessed from either Kyenjojo Town Council or from Kamwenge town Council in Kamwenge District. The road is a fairly maintained Class II murrum road.

### **5.8.2 Telecommunications**

The mobile telephone system is available throughout most of Kamwenge District. The most available telephone networks within the Settlement are the Mobile Telephone Network (MTN) and Airtel. Warid is rare.

## **5.9 Employment Opportunities**

Within Rwamwanja, the main employment opportunities are limited to farming and related trade. Paid employment is coming up within the Settlement due to the many implementing partners who sometimes pay refugees to perform certain tasks such as road construction. As per policy, at least 30% of the Job opportunities provided to the refugees must go to the host community. This is happening although the Host community (as represented by the LCV Chairperson of Kamwenge District) seems to think that the quarter given to them is less than 30%.

### **5.10 NGOs and CBOs in the Area**

Kamwenge District area in general and the Rwamwanja Settlement in particular has a number of implementing partners many of whom are NGOs. They provide a wide range of services within Settlement and are mostly targeting the delivery of minimum health care packages. The following implementing partners were known to be within the Settlement.

- OXFAM
- UNICEF
- World Vision (WV)
- Adventist Development and Relief Agency (ADRA)
- Action Africa Help International (AAHI)
- Lutheran World Federation (LWF)
- International Organisation for Migration (IOM)

Most of these implementing partners are only there at the height of the emergency to support the Settlement efforts.

### 5.11 Homogeneity and Acceptability of Incoming Communities

Discussions with the Settlement Commandant and his staff indicated that many of the Locals have accepted the incoming refugees since they did derive a number of benefits from the Settlement. The benefits include receiving up to 30% of the social assistance that is provided to the refugee community. This was evident in respect of water sources, health services and afforestation. On the other hand there is a significant minority who were not happy with the incoming of the refugees. These are the medium to high income Nationals who were evicted from the land. They do have sympathisers both within the local community and at the district levels.

There is an ongoing Court case as proof of the low level conflict that has since evolved. On balance of probabilities, it would appear that some more work needs to be done to ensure that all nationals accept the incoming refugee community.

## 6. ANALYSIS OF ALTERNATIVES

At the time of conducting this Environmental and Social Impact Assessment, the Office of the Prime Minister and the United Nations High Commissioner for Refugees (OPM/UNHCR) had already taken the decision (in April 2012) to host the Congolese refugees in Rwamwanja Settlement thereby limiting the number of alternatives available. Nevertheless it is instructive to explore other alternatives that could have been considered by the OPM/UNHCR. In so doing there is need to balance the socio – economic costs of the Settlement versus the Environmental costs as well as the actual costs of operating the facility. The current Uganda Government Policy provides for a Settlement approach to handling refugees which is the **Alternative A**. It has been the practice in Uganda to adopt this alternative such that refugees can become self reliant as they settle and produce their own food. After sometime, relief food is stopped and in the end refugees can settle and apply for Ugandan citizenship in accordance with the law - (indeed in the case of the RS, the challenges due to limited land size, land degradation, poaching and deforestation among others will be manifested).

The other approach would be to follow a camp policy where refugees are not allocated plots of land but are provided directly from a central authority. That will be **Alternative B**. Under this policy, it is preferable if the refugees are expected to stay for a shorter time so that relief items can sustain them in the short term. The land taken is also relatively small. The potential for conflict about the use of natural resources will still remain.

The third Alternative C could be for Government to block any refugees entering Uganda. Uganda may not find this alternative viable since it is a signatory to United Nations Convention on refugees.

The fourth Alternative D. would be to do nothing where Refugees are allowed to freely mix with the community and fend for themselves. This alternative seems to work in the border areas where tribes have crossed national boundaries and refugees have relatives in the neighbouring country. They have similar cultural practices and often speaking the same language. On the other hand such an alternative is not favourable in case the refugees start launching hostile activities against their own country an action that would put the host nation at logger heads with a neighbouring state. Such an alternative would not be advisable.

Under the above scenarios, it would seem that the viable alternatives for Uganda are alternative A and B. The Uganda Government has already decided to implement alternative A. This study is therefore done on the basis of **Alternative A**.

## **7 DESCRIPTION OF SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES**

Chapter 5 above has described the baseline environmental condition of the project area and in some ways set the scenario for the different potential environmental impacts that could result from the refugee Settlement activities. While the immediate Settlement of the Rwamwanja project area will lead to a number of environmental impacts, the future operations and happenings within and around the Settlement will also lead to yet different type of impacts. It is noted that the Settlement could greatly impact mainly on the natural resources management, the sensitive ecological areas within Rwamwanja and the Katonga Game Reserve. More over the team has documented a number of complaints from some of the stakeholders whose socio economic activities were disrupted when the refugees started to come. Such stakeholders include those people who had reoccupied the Settlement (whether legally or otherwise) after the departure of the Rwandese refugees in 1994.

The Settlement has a large number of refugees (28,287 by 16<sup>th</sup> November 2012) the majority of whom are youths and children. This in itself has a number of potential consequences to the population dynamics in the next 10 to 20 years and will greatly increase the refugees' needs thereby having further social and environmental impacts.

On the other hand the Settlement comes with a number of positive developments and impacts. It is important to find ways and means of enhancing these positive impacts for the benefit of the refugees, the host community as well as the environment.

This chapter therefore, serves to assess significant positive and negative social and environmental impacts associated with the proposed Settlement and proposes mitigation measures. The purpose of identifying significant impacts is to inform the decision-makers such that an informed and robust consent decision can be made.

As described in the methodology section, the risk assessment to determine the level of significance of the impacts is based on the AS/NZ Standard 4360: 1999.

### **7.1 Structure /System for implementing the Mitigation measures**

It is the practice that all stakeholders will have a role to play if the proposed mitigation measures are to be implemented. The next Chapter 8 describes the Environment and Social Management and Monitoring Plan (ESMMP) to implement the proposed mitigation measures.

### **7.2 Positive Impacts and enhancement options (All as appropriate)**

**The 30% rule:** - The social analysis described both the host community outside and within the RS as well as the refugees as poor with many of refugees being described as desperate. The policy of the OPM and UNHCR is that the social economic status of all communities in the project area should improve. , 30% of the social benefits (health services, schools, water and sanitation) should accrue to the host community. In this regard the following aspects will improve

- **Water and sanitation** – at least 30% of the water sources (mostly boreholes) will go to the host community outside the Settlement while nationals within the Settlement will use the same facilities provided to the refugee community.
- **Health facilities** – Both the host community and the refugees will access the same facilities and 30% of the medicines going to the health units within the supplied to those outside of the Settlement (in the short term). In this case some members of the host community claimed that they are discriminated against while receiving treatment at health units within the Settlement.

The impact due to this 30% rule can be described as **Positive and High**.

**Increased produce in markets:** - Although the district officials claimed that the revenue had gone down after the nationals who had been occupying the Settlement were evicted, there was evidence in the nearby market that the refugees who had settled earlier were selling many of their early produce in the market since they receive the full food ration from WFP. This increases the commerce and local revenue. In the long term this impact will increase until the time when the population increases to such a level that they can no longer produce enough on the allotted land

(especially once the food supply from WPF has stopped). Until then, this impact can be described as **Positive and High**.

Add as positive aspect for the host communities the support for school education by the humanitarian organisations!

**Labour Transfer:** - Presently the host population has reduced due to the exodus of the nationals such that labour is limited. The coming of the refugee community with a large number of youths provides a good reservoir of labour. On the other hand if the labour force is not well guided, it can be source of conflict in the area. The labour reservoir may be described as **Positive and Moderate to High**.

**Cultural heritage enhancement:** - Both the host community and the refugees have fairly different cultures with each displaying some positive as well as negative aspects. With appropriate guidance, it may be possible for the communities to improve their own heritage by adopting some of the good cultures and practices from the other community. This impact may be described as **Positive and moderate**.

### ***7.3 Potential Negative Impacts at and after Settlement Stage***

At the time of ESIA the severity of the impacts will be different from what will be manifested in the longer term when the refugees are well settled. In fact most of the impacts will increase in magnitude with increasing population figures along with overuse of the natural resources. These are described below.

#### ***7.3.1 Physical Impacts***

##### ***7.3.1.1 Climate Change Potential and air pollution***

Although the temperatures are estimated to rise in the future, the National Uganda action may not reduce the likely temperature increases. However as signatories to the UNFCCC, it is essential that actions to reduce the current temperature rises are done as opposed to the current practice of indiscriminate tree cutting which has the tendency to lead to temperature increases. Reduction of vegetation cover (deforestation)

Secondly, although the pollution potential was described as low (VC higher than 600M<sup>2</sup> S<sup>-1</sup> or maximum mixing height (MMH) < 1.0 km) some tendencies were observed that could lead to air pollution particularly in doors. As stated before, many of the refugees continue to cook indoors against the advice from the Settlement Authorities. Burning biomass for cooking inside their houses using traditional stoves leads to severe indoor air pollution which is a serious health concern especially for

women and children. Moreover, it was further shown that the majority of the settlers use firewood for lighting at night. This introduces fire into the space limited houses leading yet to additional indoor air pollution. This is also a major fire hazard considering that the grass thatched houses are short and highly inflammable.

Thirdly, the analysis showed that almost all the refugee community live together with their animals/ birds in the same house which increases indoor air pollution. While this is a health concern, it is also a serious air pollution issue. This impact is likely to be more severe in the short term before the settlers build more permanent housing that can allow for separate cooking facilities as well as separate accommodation for livestock (mainly goats) and birds. As a way to mitigate this impact the following are proposed: -

Short term Mitigation measures (where short term refers to actions that may be taken at the time of settlement and the immediate period after settlement during which time the refugees are adjusting to the new environment): -

- Conduct sensitisation against uncontrolled tree felling should continue to reduce the potential contribution to climate change and at the same time protect the water catchment areas in addition to ameliorating the micro climate of the project area.
- Marking of trees which are ongoing will be enforced so that settlers can respect the tree marking colour code.
- Sensitisation against the practice of cooking indoors so that the family is not exposed to indoor pollution will be done.
- Sensitisation against the practice of staying in the same accommodation with livestock will be part of the message passed on to the settlers;
- Sensitisation on use of energy saving cooking stoves will commence immediately and implementation will be spread out in phases as more trainers are brought on board;
- Hurricane lamps will be encouraged to improve lighting at night ( if possible apart from the work for food policy, the incentive could be extended to provision of a hurricane lamp);

Long term strategy:-

- A comprehensive tree planting programme taking into account the land use zoning (disclosed below) will be enforced and implemented to provide mitigation against greenhouse gas increases;
- All Settlers will be required to have separate accommodation for their livestock/animals as opposed to the current practice where humans and animals compete for space in the same dwellings;

- All will be required to separate the cooking area from the living quarters in addition to using safer energy efficient cooking stoves.

### **7.3.1.2 Non Hazardous and Hazardous Waste**

Most of the non hazardous waste is mostly biodegradable domestic waste consistent with a village set up. The improper management of such waste can quickly leads to poor hygiene, attracting vermin and subsequently leading to disease and associated health risks.

The most likely hazardous materials at the site are the large numbers of torch batteries (considering that over 80% of settlers use torches for lighting which leads to a large number of batteries), potential use of inorganic fertilizers in the future as well as the medical waste at the health facilities and clinics. It was noted that there is an incinerator for medical waste at the Health Centre IV.

#### Mitigation Measures

##### **Non Hazardous waste: -**

- First of all, organic waste will be used as much as possible to produce compost as it is already promoted in the Settlement area by implementing partners. If waste is to be buried on-site, it should be covered at least weekly with a thin layer of soil to prevent it from attracting vectors of disease.
- The management will designate appropriate waste collection, appropriate dumping and composting sites and will subsequently proceed to regularly empty waste collection points zones. The implementation of a programme that will be set up by the management will as much as possible aim at reducing, re-using and recycling before direct dumping can be carried on.
- After minimising the waste, the remaining collected non-organic waste will be disposed of properly by dumping in landfills, where no risk of groundwater contamination exists.
- 
- Finally, waste management should be linked with an awareness campaign.

##### **Hazardous Waste Material: -**

- The Local leaders will arrange to have centralised collection containers for used torch batteries such that when the containers are full, the batteries will be taken for disposal either at a NEMA approved disposal area, or sold off to those who recycle them;
- All health units will have incinerators for disposal of medical waste. In case the facility cannot have appropriate incinerator, then it will enter into an agreement

with the Health Centre IV with an aim of sharing the existing facility. Any other private clinic to be established will in addition to the other standard requirements first show ability to dispose off medical waste before it can be licensed to operate.

- Initially, all settlers will be encouraged to implement organic farming that does not require the use of chemical fertilisers.
- In the long term, should the land require chemical fertilisers, then potential users will first be sensitised on the appropriate use of fertilisers under the guidance of the Settlement Extension personnel;
- No settler will be permitted to use a chemical fertiliser that has not been approved by the extension office of the Rwamwanja Settlement Management.

### **7.3.2 Biological Impacts**

#### **7.3.2.1 Agriculture and Soil Conservation**

As discussed before, the mainstay for both the refugee community and the Nationals is subsistence agriculture. They cultivate mostly maize, cassava, beans, groundnut and sweet potatoes. Banana trees and sugar cane can also be found in agricultural plots, which were under cultivation by Nationals before they were evicted in April 2012. Very few animals were seen during the field survey within the Settlement area. There is a high possibility that in the future refugees may wish to poses livestock despite the limited land area , but it is likely that after the first harvest, the refugees will invest in buying livestock as an important form of social security. At the moment of our survey no information was available about possible future programs of implementing partners, which aim to distribute or promote livestock to the refugees. Although most of the agricultural land within the Settlement area does not exceed 30% slope and no erosion forms have been yet noticed. Nevertheless, soil conservation measures will be necessary to avoid erosion and fertility losses in the long run ensuring that farming activities are only permitted in designated places as shown under the land Use map.

Moreover it was observed that the trees Inside the agricultural plots were most likely to be cut to reduce the competition between crops and trees or to get firewood. Trees are only tolerated if bordering the plots. In some cases during our field survey, we noticed that agricultural plots extend into protected areas like buffer zone along wetlands and rivers or into protected natural patches of trees.

Overall, there is the likely hood of degrading the landscape due to increased agricultural activities, cutting down of forests all leading to enhanced soil erosion and

land degradation. This impact can be high. In view of the foregoing, the following mitigation measures will be undertaken: -

- No Agricultural Activities will be permitted in open wetlands and Riverine forests;
- Buffer zone of 50 metres along the wetland ecosystems will be respected and not cultivated;
- Rocky hills and slopes in excess of 30 degrees will not be cultivated;
- To avoid diminution of tree vegetation cover, protected trees and ecosystems (like wetlands and rivers) will be clearly identified and agro-forestry practices will be intensively promoted;
- No agriculture will be permitted within the Buffer zone along the Katonga Game Reserve boundary which will instead be planted with indigenous forests trees;
- Tree planting using local *Leguminosae* species and/or fast growing species (local or exotic) which can maintain or increase crop production (conservation of soil fertility) and bring additional resources like wood for construction or firewood consumption will be promoted:
- Sensitise the Community through the Settlement extension workers about good farming practices and reduction of soil erosion.
- Promote hedge barrier planting using tree and/or grasses and following contour lines in order to create bench terraces ( as the most adequate agro forestry technique (See Fig 7.1)) to reduce soil erosion.
- Optimize crop association (soil fertilisation, soil conservation);
- The management will promote organic farming practices by encouraging composting and avoiding the use of chemicals and pesticides;
- To conserve land, free ranging livestock will be discouraged, and instead smaller livestock such as goats, pigs and poultry will be encouraged within the boundaries of the Settlement;
- In view of the land shortage, only “zero grazing” should be promoted inside the Settlement by promoting the use of animal pens.

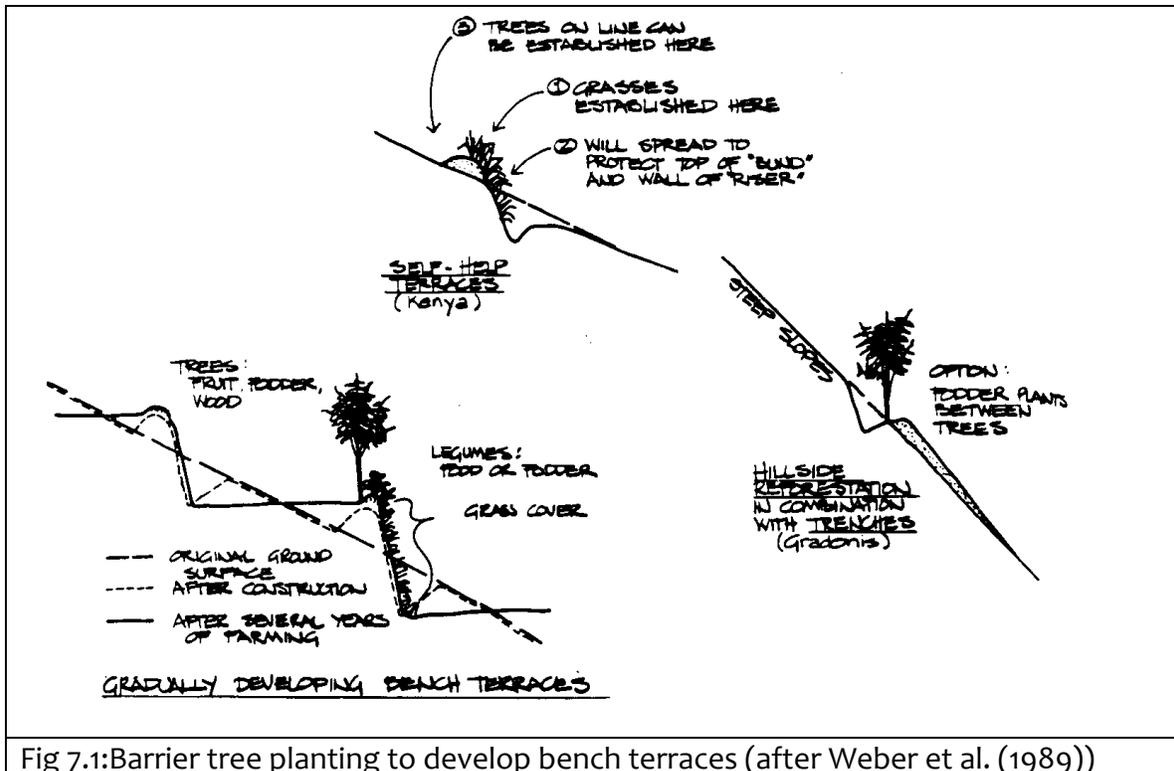


Fig 7.1: Barrier tree planting to develop bench terraces (after Weber et al. (1989))

### 7.3.2.2 Fragile Ecosystems Including Wetlands, Protected Areas

The major fragile ecosystems in the settlement include the wetlands, Riverine forests as well as the buffer area between KGR and the RS. The others which may not be cultivated (as discussed above) are the shrub savanna on rocky hill sides. These are described fully under land use map (Fig 7.2) below in the proceeding chapter. Already a number of challenges affecting the fragile ecosystem have been observed and more are likely to manifest themselves as the RS population increases. The main challenges which have come up due to the Settlement include the following: -

- Increased poaching of wild game in the park;
- Settlements into Katonga Game Reserve by those Nationals who were evicted from the Settlement;
- Some of the Refugee plots are very close to the wetlands and Riverine forests, and a number of them have encroached to within 50 metres of the wetlands;
- Silting of wetlands due to unsustainable cultivation methods at the edge of the wetlands by the refugee community;
- Charcoal harvesting in the Riverine forests;
- Increased bush burning especially for wetlands which is a common practice during the dry season;
- Possible degradation of the ecosystem services as provided by the wetlands, forests and the ecosystem in general;

## Mitigation measures

In the short term it will be important to sensitise the refugee community about the need to conserve the environment and to discourage them from uncontrolled cutting of trees, poaching, encroachment and bush burning. The following mitigation measures will be implemented;

- The land use zones which have been proposed (see Fig 7.2) will be strictly implemented by the management and the refugee community will actively be involved in the implementation of the protection measures;
- The RS will work closely with the UWA to strengthen patrols along the Game Reserve ensuring that no refugees cross into the protected area;
- A buffer zone of at least 500 metres will be created to separate the Settlement from the Protected Area. This buffer zone will be planted with indigenous tree species of the same type as originally existed in the area;
- The RS will experiment with the idea of planting fruit trees in the settlement initially (although there is a fear that the fruit trees may attract all sorts of people thereby exposing the KGR)
- The management will list endangered or listed species (such as the *Aloe volkensii* that was encountered on rocky hillside) as they identify them for future protection and management;
- The management will ensure that all wetlands within the Settlement are identified and protected from encroachment by delineating the 50 meter buffer zone around them;
- Those refugees who have settled within 50 metres of the wetlands and riverine forests will be relocated and moved away from the wetland such that no one will conduct any agricultural activities within 50 metres of a designated wetland;
- Bush burning will be prohibited in line with the Law in Uganda against bush-burning. While prescribed bush burning may take place within the KGR, there will be strict measures to ensure that the Katonga River is not encroached and the wetland there is not burnt

### **7.3.2.3 Deforestation and the need to meet the Energy demand**

As discussed before, the main power source for domestic needs in both the Settlement and outside of the Settlement is Firewood for cooking, while torches, kerosene/paraffin and Firewood continue to be the main sources of energy for lighting for most households. Subsequently firewood demand, primarily for cooking, but also for heating water (hygiene) and for lighting is high and its impact on the

vegetation will be progressively manifested with time. Charcoal burning is becoming an important economic activity both within and outside of the Settlement.

Before the arrival of the refugees, relative densely wooded savannas with a tree and shrub cover between 20% and 40% prevailed in the savanna landscape of Rwamwanja. Average growing stock was estimated to be 20-30 m<sup>3</sup>/ha. Currently, the tree and shrub cover in Rwamwanja and its surrounding is still quite high as outlined above. However, ever since the arrival of the Congolese refugees, the vegetation cover has been continuously reduced.

It is anticipated that initially firewood may be available as the settlers clear their gardens for cultivation in addition to the deadwood in the woodlands. With time however, this source will be exhausted and people will be forced to collect and cut wood from outside the Settlement. A radius of more than 10 km for wood collection is likely and this is bound to impact on the host communities as well which may lead to conflicts between host and refugee communities.

The situation is not helped by the use of traditional food preparation techniques, which typically consist of an open cooking fire (“three stone stove/fire”), which is not fuel-efficient leading to a fuel consumption rate of about 1.5 kg/person/day progressively.

Presently, houses are of mud and wattle. In future as the refugees become more affluent there may be an urge to use baked bricks to construct their houses which will further increase the strain on the firewood resources.

At the time of the survey the refugee population was under 30,000. This could easily expand to 50,000 or even 60,000 if the refugee movements are not well controlled and if the carrying capacity of the camp is ignored. If we take a planning figure of 50,000 inhabitants for Rwamwanja their total domestic energy needs will vary from about 27,375 tons to 36,500 tons of wood per year using the open fire system (1.5 to 2.0 kg/person/day). Of the total area of Rwamwanja of 7,890 ha, 6,300 ha are woody savannas (savanna woodland and tree savanna) allocated for housing and cultivation (see Table 5.1 above). The 50,000 inhabitants of Rwamwanja corresponding to about 10,000 households will need at least 5,000 ha for the installation of their plots not taking into account the needs of the nationals some of whom are within the Settlement.

The high concentration of population at Rwamwanja will transform most of the woody savannas into settled agricultural lands (inhabited/cultivated area). As a consequence the annual wood increment of the remaining trees and shrubs on the former woody savannas will be very low. As an average for all land use types at Rwamwanja we assume that the annual wood increment will be at maximum 0.5

tons/ha or 3,945 tons in total for Rwamwanja. These rough estimates clearly show that more than 85% of the annual domestic energy demand of the Rwamwanja inhabitants has to be met from the surrounding areas! Even when considering a successful promotion of fuel efficient stoves reducing the daily firewood consumption to 1 kg/person/day, still 14,305 tons of wood have to be met annually by the surrounding areas. This imbalance of supply and demand is even worse when considering other demands for forest products (construction wood, charcoal burning for both local use and to meet the huge demand for export out of the project area). As a result of the forgoing, the deforestation potential/risk within both the Settlement and surroundings areas is imminent. This demand could lead to possible conflict as both the refugees and nationals compete for the same natural resources for their livelihoods. Depletion of natural resources associated with refugees operations leading to conflicts with the host communities are well known in the midst of humanitarian crises (such as happened with the Sudanese refugees in Eastern Chad or in South Sudan and among the Somali refugee camp of Dadaab in Northern Kenya).

The deforestation in and around Rwamwanja will also affect the availability of non-wood forest products. Both, refugees and local population, highly depend on non-wood forest products like honey, fruits, vegetables, ropes, and medicinal plants for their subsistence and income generating activities. In the short term, the impact will be minimal since there will be enough left over wood from the cultivation activities.

#### Mitigations:

In the short term, there is a need to sensitise the communities about the need to preserve forests and their products. The measures that the Settlement is putting in place which include the marking of trees, tree planting and promotion of energy saving cook stoves will be strengthened and improved. It is important that trees are marked in the future prior to the arrival of the refugees.

#### Medium to longer term:

The study has attempted to identify some of the ecosystems within the project area. However, to minimize further diminution of tree vegetation cover, protected trees and ecosystems (like wetlands and rivers) have to be clearly identified so that mitigation measures may be focused better to meet the specific demands of different ecosystem challenges. Among others, the following is to be done in the long term: -

- Designate specific zones within the project area which are to be maintained for forestation. In addition the practice of settlers being encouraged to plant trees along the edges of their land and some other specified areas will continue (e.g. around schools).

- Within the agricultural plots, it is necessary to plant trees focusing on local **Leguminosae** species and/or fruit trees that can maintain or increase crop production (conservation of soil fertility) and bring additional resources like wood for construction, firewood consumption or fruits.
- In those areas which have been identified for planting woodlots, firebreaks will be planted.
- Sensitisation will be conducted among the settlers to ensure that invasive species of trees /crops are not introduced in the area.
- In future Adobe bricks that do not need firewood will be promoted and used. Also compressed bricks can be used, but after sensitising the end users about their benefits.

### 7.3.3 Social Impacts

#### 7.3.3.1 Land Use, Population and Settlement issues

As has been noted above, the plot of land availed to each refugee household is only 100 by 50 metres in size (0.5 of a hectare) and the housing starts with a small reed hut covered with either a plastic sheet or tarpaulin which graduates to a small single mud and wattle/reed house.

Secondly, the refugee population is likely to increase rapidly in addition to the national population growth which is estimated at a high of at least 3% per annum. This population profile has major implications in the near future as the young people grow to practice their reproductive roles and also to meet their daily subsistence needs.

Thirdly, until recently there were no Congolese in the project area and the entire project area had been resettled by Nationals surrounding Kamwenge. No records were available to classify these re-settlers and no records have been made to indicate the new places they may have settled possibly including the nearby Katonga Game Reserve.

#### Mitigations

In view of the above considerations, it will be necessary for the Settlement management to formulate a more sustainable land use policy and **Master Plan**. Such a plan will designate places for forests, buffer zones to protect the wetlands and protected areas as well as areas for use by the refugee community. **Fig 7.2** shows the proposed Land use plan which the management may consider and implement after additional exposure to other stakeholders. In addition the following will be relevant: -

- The Master Plan will be exposed to all stakeholders and will be made known to all at every available opportunity;
- The boundary of the protected area will be opened and a land title obtained taking into account other potential claimants of the land in accordance with the law;
- Government should put in place a belated mechanism to identify and follow up those Nationals who were displaced in April 2002 and establish their new Settlement areas while at the same time they will establish a clear policy on those Nationals that are within the Settlement;
- The Government will further determine whether their new places are not in conflict with the environmental laws (such as those who were reported to have settled in Katonga Game Reserve);
- Where appropriate Nationals who are to be evicted from the Settlement should be compensated in accordance with the law after conducting an Abbreviated Resettlement Action Plan (ARAP);
- Sensitise the local community about Family planning /Control measures and provide appropriate birth control / contraceptive approaches;
- Ensure that all school going children actually go to school in line with the National Policy of UPE;
- A clear Policy guideline covering those other refugees of Rwandan origin who did not go back to Rwanda following the coming in power of the RPF .

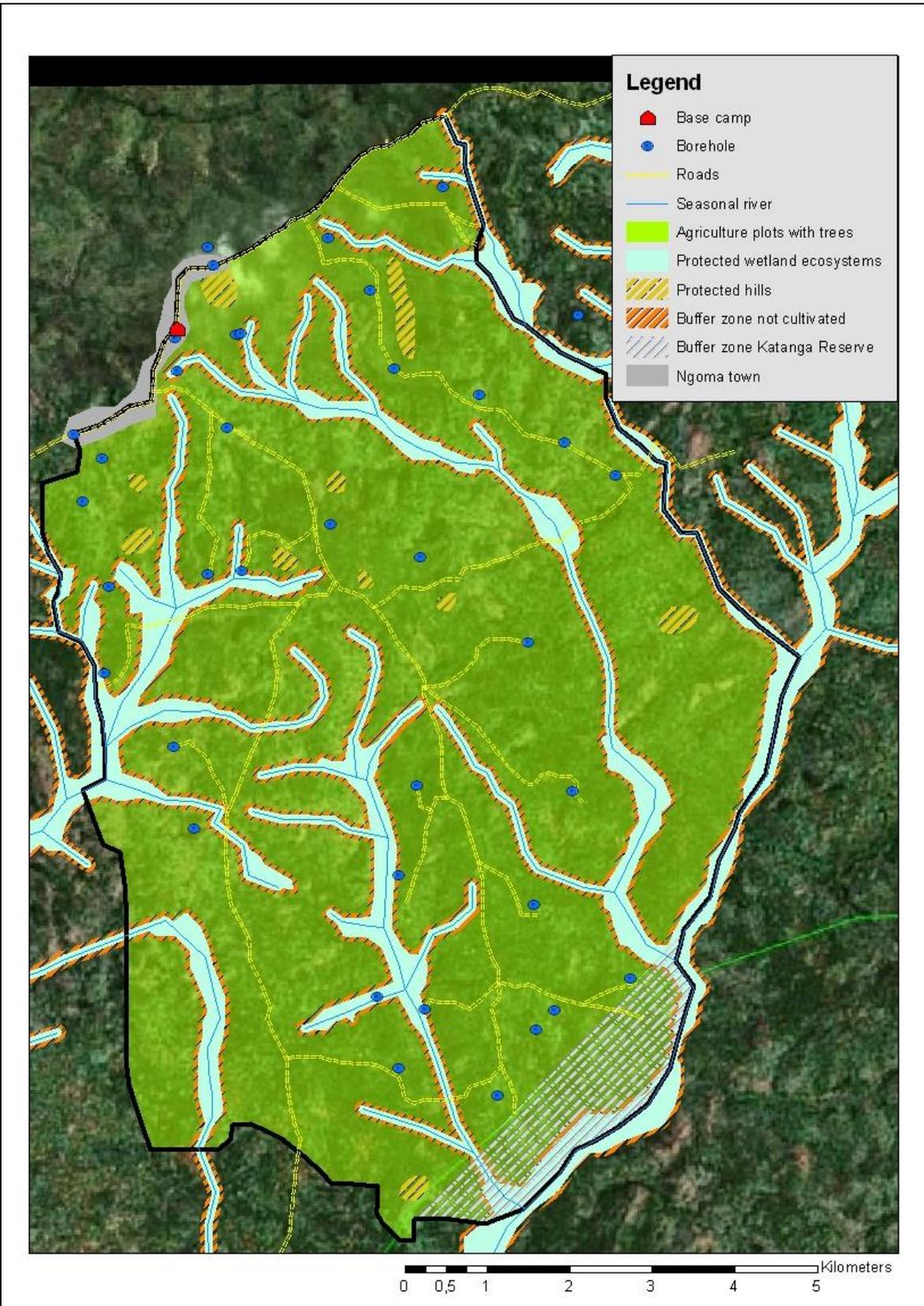


Fig 7.2: Proposed Land Use Plan for Rwamwanja Settlement Area

### 7.3.3.2 Health

There is only one health centre III which congested serving about 60,000 people (both the refugee population as well as the host community) with two outreach clinics in addition to mobile clinics operated by *Medicins Sans Frontiers* (MSF). Due to the pressure on the health faculties, the indigenous believe that they are less welcome to the health facility compared to the refugee community.

With increased population, these facilities will no longer be adequate to serve both the Nationals and the Refugee community.

#### Mitigation Measures

- The Health Centre III will be upgraded to Health Centre IV status with more outreach clinics such as Health Centre IIs and Health Centre Is;
- In the meantime Nationals should continue to benefit from supplies availed to the refugee community and the 30% rule may continue to apply.

### 7.3.3.3 Water

**Domestic Water AND Water for production:** As stated before, the water quality of the borehole water has not been fully tested, while no functional analysis / tests have been conducted on the water from open sources. Secondly, there are no separate watering areas designated for livestock especially for the dry season. Thirdly, no proper hydro geological survey was conducted before the boreholes were sunk. Subsequently their sustainability or likely impact on the aquifer characteristics remains uncertain. Finally it is likely that with an increasing refugee population in addition to the need to supply water to the host community, the borehole sources will neither be enough nor adequate. There will be need to search for alternative sources.

#### Mitigation Measures

- The management of the Settlement will arrange to make a comprehensive analysis of all the water sources to ensure their portability;
- The settlers will be sensitised against the use of unprotected / unsafe water sources for domestic use;
- Ultimately each house hold will be required to associate with a known protected / safe water source;

- As an alternative, those with appropriate roofs will be encouraged to collect rainwater (Rain Water Harvesting)
- In the longer term, there will be separate water sources for domestic use from those for livestock;
- To ensure that no borehole is drilled through unconfined aquifers and to estimate their sustainable pumping capacity, an adequate hydro geological survey will in the longer term be conducted; and
- An appropriate management and a comprehensive monitoring system of water quality and quantity over time will be developed;
- In order to meet the growing demand for both the settlers and the host community, the management should explore the possibility of exploiting the nearby Katonga River (pumping system) as a source for both domestic water and water for production;

#### **7.3.3.4 Sanitation**

As has been reported above, the sanitation situation is in a poor status with the household latrine coverage at a very low status. The few latrines are also very shallow.

Secondly it was observed that some of the settlers are very close to the streams and their latrines are less than 50 meters from the stream. There is a possibility that some of the pit latrines are sited over unconfined aquifers, which can lead to contamination of water sources.

#### Mitigation measures

- Human Settlements will have to respect a 50 meters buffer zone around streams and wetland ecosystems;
- Latrines will be sunk downstream of wells and will be at least 30 meters from any groundwater source and at least 1.5 meters above the maximum water table;
- Latrines should ideally be no more than 50 meters from dwellings as this encourages good hygiene and the average depth of latrine pits will be over 5 meters;
- Each household /family unit will have own latrine;
- Reusable light latrine floor concrete / Plastic slabs will be promoted to reduce the need to use wood products and at the same time ensure easy hygienic cleaning;
- A simple wooden/plastic cover will be supplied for each latrine to reduce the presence of insects.

#### **7.3.3.5 Education**

The number of school going children is overwhelming and yet there are only two Primary Schools within the Project area and no secondary school was observed. Both the host community as well as the refugees use these primary Schools. In a way this has put a lot of strain on facilities, which were originally used by the host community.

School attendance is lower among the Refugee community, even though that of the host community is equally unimpressive. One reason for low school attendance is the limited number of classrooms available compared to the school going population. There is also lack of awareness especially among the refugees regarding the importance of school.

#### Mitigations

- The refugee community will be sensitised on the need to take their children to school and as facilities improve, they will be compelled to take their children to schools in line with the national policy of Universal Primary and Secondary Education;
- The Settlement will be required to increase the number of classrooms and teachers to accommodate the increasing number of school going children;
- The Settlement should provide land for those who may wish to establish privately run schools in order to support government efforts as is the case outside of the Settlement

#### **7.3.3.6 Potential for enhanced poaching due to acquired / adapted Eating Habits and Traditional Delicacies**

The social analysis showed that the Congolese community is more inclined to partake of bush meat compared to the host community which leads to serious implications regarding poaching within the protected areas.

#### Mitigation measures

- Sensitise the community about the need to protect wildlife and the fact that poaching of wild game is illegal;
- The Settlement management will work closely with the LWA to discourage poaching of wildlife;
- Refugees will be encouraged to keep domestic birds to fulfil the need for bird meat;
- The refugee community has to be involved actively in anti-poaching patrolling.

#### **7.3.3.7 Construction of Base Camp**

At the time of the study, the construction of base camp was ongoing. These is a need to ensure that the base camp is a model demonstration camp where environmental concerns are taken as a high priority. It is proposed as follows: -

- During the construction, erosion tendencies will be minimised by exposing as little as possible of the soils within the construction zone;
- The RS management will put in place the local environmental liaison unit to ensure environmental compliance within the base camp and the settlement in general;
- The RS management will ensure waste management facilities are in place;
- Separation of waste between hazardous and nonhazardous /Biodegradable will be practiced at the camp and disposal will be in line with Waste management regulations;
- The RS management will plant appropriate trees within the camp to protect it from soil erosion and wind damage;
- As much as possible the camp will practice rain water harvesting;

#### 7.4 Summary of the Anticipated Impacts, their Level of Significance and Mitigation Measures

Table 7-1 below provides a summary of the identified risks and threats/potential impacts, their level of significance and potential mitigation measures. The threats with the highest risks have been highlighted in **RED!**

Table 7-1 Summary of Risk Categorisation for the Identified Threats

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
Climate Change concerns and air pollution within dwellings	Likely	Moderate to Major	H to E	Increased sensitization and Continue marking of trees. Increased use of energy saving cooking stoves and Implementation of a comprehensive tree planting programme in accordance with the land use zoning. Separate animal accommodation as well as cook places from living quarters;
Hazardous and Non Hazardous waste	Likely	Moderate	H	Put in place a program to minimize /reduce, re-use and recycling waste and Make use of landfills or use organic waste to produce compost. Put in place centralized collection containers for used torch batteries and dispose at a NEMA approved disposal area, or sold off to those who recycle them. Ensure there are incinerators for disposal of medical waste;

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
				Encourage organic farming and use chemical fertilizers in long term will be with support from the Settlement Extension personnel;
Agriculture and soil conservation	Likely	Minor to Moderate	H	Sensitize the Community on reduction of soil erosion. Promote hedge barrier planting using tree and/or grasses following contour lines; To conserve land, free ranging livestock will be discouraged in favor of “zero grazing”; No agricultural activities to be permitted in open wetlands, Riverine forests, within the KGR buffer zone and rocky hills whose gradient is in excess of 30 degrees.
Fragile Ecosystems wetlands, protected areas and potential for enhanced poaching	Almost Certain	Major	H-E	Strictly implement the land use zones which have been proposed; The OPM / Settlement to work closely with the UWA to strengthen patrols along the Game Reserve boundary; Maintain a buffer zone of at least 500 m to separate the Game Reserve; The management will list endangered or listed species for conservation; Designate all wetlands within the Settlement and make it known to the refugee community; Relocate those refugees who have settled within 50 metres of the wetlands and ensure no agricultural activities there in; Sensitize the community about the need to protect wildlife and the fact that poaching of wild game is illegal; The Settlement management will work closely with the UWA to discourage poaching of wildlife; Refugees will be encouraged to keep domestic birds to fulfill the need for bird meat;
Deforestation and the need to meet firewood demand	Almost Certain	Catastrophic	H-E	Designate specific zones within the project area which are to be maintained for forestation; while settlers are encouraged to plant trees along the edges of their land and some other specified areas; Plant mostly local <i>Leguminosae</i> species and/or fast growing species to maintain or increase crop production and conservation of soil;
				Expose the Land use Master Plan to all stakeholders;

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
Land use, Population and Settlement issues;	Likely	Moderate	H	Open boundary of protected area and Plant the buffer zone with trees which were originally indigenous to the area. Where appropriate Nationals who are to be evicted from the Settlement should be compensated in accordance with the law after conducting an Abbreviated Resettlement Action Plan (ARAP); Government to identify and follow up those who were displaced and determine whether their new places are not in conflict with the environmental laws; Sensitize the local community about Family planning /Control measures and provide appropriate birth control / contraceptive approaches; Ensure that all school going children actually go to school in line with the National Policy of UPE;
Health Concerns	Moderate	Moderate	H	The Health Centre III will be upgraded to Health Centre IV status with more outreach clinics such as Health Centre IIs and Health Centre Is; In the meantime Nationals should continue to benefit from supplies availed to the refugee community and the 30% rule will continue to apply;
Water Concerns	Moderate	Moderate	H	Conduct water and water sources analysis to ensure portability; Through sensitization encourage Rain Water Harvesting; Plan to conduct an adequate hydro geological survey to confirm sustainability; Develop an appropriate management and monitoring system of water quality and quantity; In future explore the possibility of exploiting the nearby Katonga River as a source for both domestic water and water for production;
Sanitation Concerns	Moderate	Moderate	H	Human Settlements to respect a 50 meters buffer zone around streams and wetland ecosystems; Latrines with Reusable light latrine floor concrete / Plastic slabs to be sunk downstream of wells and to be at least 30 meters from any groundwater source; Each household /family unit to have own latrine;
Education Concerns	Moderate	Major	H-E	Sensitize the refugee community on the need to take their children to school and eventually compel them to do so; Increase the number of classrooms and teachers to accommodate the

Threat	Likelihood	Magnitude	Risk level	Summary of Mitigation Measures
				increasing number of school going children; The Settlement to provide land for those who may wish to establish privately run schools in order to support government efforts;
Construction of Base Camp	<b>Moderate</b>	<b>Minor</b>	<b>M</b>	Ensure waste management facilities are in place; Plant appropriate trees within the camp to protect it from soil erosion and wind damage; As much as possible practice rain water harvesting; Separate hazardous waste from organic waste and dispose in line with Waste management regulations;

Key for Risk level:    **L** = low    **M** = medium    **H** = high    **E** = extreme

## 8 ENVIRONMENT AND SOCIAL MANAGEMENT AND MONITORING PLAN (ESMMP)

### 8.1 Introduction

It is a requirement (according to EIA guidelines) that an ESIA should have an Environment and Social Management and Monitoring Plan (ESMMP). In the case of the RS, environment monitoring must be carried out to ensure that the Settlement activities comply and adhere to environment requirements (laws and regulations). This will be based on this Statement, the accompanying Certificate of Approval as well as additional certificates of approvals which may be obtained in case a major development is planned in or close to the Settlement. Any future development within the Settlement will require a separate Environmental and Social Impact Study. However this ESMMP will take into consideration the UNHCR safeguards on environment management.

The Settlement monitoring plan will be guided by this ESMMP which will serve as a reference instrument for monitoring environmental compliance. In order to conduct the environmental monitoring it will be a requirement that the Rwamwanja Refugee Settlement have in place a specialist environment supervisor (for the physical, biological and the social environment) capable of implementing the respective NEMA certificate of approval.

The monitoring will cover the following among others. Monitoring indicators have been highlighted under Table 8.2: -

- Impact on wildlife in the Katonga Game Reserve, the Wetlands, and other sensitive ecological zones within the Settlement
- A survey and identification of endangered species including those on the IUCN Red List;
- Quality and Quantity of the water for both domestic needs and for production;
- Enforcement of the Land use planning zones;
- Management of Waste including hazardous waste;
- Trends in the vegetation cover to assess of land degradation/degradation and tree planting activities;
- Health facilities as well as sanitation standards within the Settlement; and among others
- Protection of Physical Cultural Resources (PCRs) should they be encountered

## 8.2 Reports

There will be a number of reports which are as follows: -

**Regular Reports:** - The Settlement Monitoring Environmentalist will inspect the entire Settlement regularly, and ensure that the mitigation measures in the EIS and all relevant environmental regulatory requirements concerning the Settlement are complied with. The Environmentalist will also conduct random inspections across the entire landscape of the Settlement.

Following these inspections, the Environmentalist will issue a monthly report a copy of which will be sent to the District Environment Officer and any other stakeholder whom the Settlement management will identify.

**Decommissioning Report:** - At closure of the Settlement (depending on the decision of the management), a final inspection report will be prepared showing the status of the environment, and what needs to be done to maintain environmental integrity in the project area.

It is in this context this Statement includes here below a provisional Environment and Social Management and Monitoring Plan (ESMMP) that may be upgraded from time to time. It provides a critical link between the mitigation measures specified in this Environment Impact Statement and the actual operation of the Settlement. Almost all of the negative impacts identified in this statement can be minimized by implementing the identified mitigation measures. The ESMMP therefore provides a

time bound program covering the general implementation of proposed environmental mitigation measures and subsequent monitoring of any emerging environmental issues during the lifetime of the Settlement up to decommissioning.

### **8.3 Policy, Legal and Environmental Management Framework in Uganda**

The ESMMP is in line with the Policy, Institutional and Legal Frame which have been highlighted under Section 3 of this Statement. It provides a time bound program covering implementation and monitoring of the environmental issues relevant to the Rwamwanja Refugee Settlement Project.

The ESMMP includes schedules and methods for implementation of mitigation measures during the lifetime of the Settlement (inclusive of its decommissioning). This plan further recommends that, during the operational phase of the project an Environmental Specialist who will be under the supervision of the Settlement Commandant be maintained to ensure that the identified negative impacts are mitigated and the positive impacts are enhanced.

It is recommended further that in as far as possible, such an environment specialist should work closely with the Settlement Commandant on a full time basis such that he/she can provide continuous guidance in line with this statement and the operating laws.

Environmental impact monitoring will be carried out regularly at least once every month and more frequently if indicated by the Settlement Commandant. As may be seen from the ESMMP (Table 8.1), implementation (including monitoring) of the management plan under this arrangement falls under the responsibility of the Settlement Commandant and the Environmentalist. The environmentalist will be under the supervision of the Settlement Commandant.

### **8.4 Public Involvement and Inter-Agency Co-Operation in Monitoring**

For the Settlement activities which will necessarily impact on the local community; it is imperative that refugee communities are involved in the monitoring process. One way of doing this is to have a specific person on the Refugee Local councils where the local communities are represented. Communities should be involved in the reforestation monitoring exercise for example through their local leaders particularly the Refugee Council 1 Executive or an Environmental Liaison Unit that will be put in place by the commandant. This is necessary to reduce costs of monitoring through community involvement. The other stakeholders who will be involved in the monitoring include the Local Government Leaders, NEMA, and the District Environment Office (Local Government).

## 8.5 Cost of Implementing of this ESMMP

Since this is likely to be mostly of recurrent expenditure, the Settlement Commandant will be expected to make an annual budget to meet the environmental costs. In this ESMMP only an indication of the likely costs is provided.

**Table 8.1: An indication / guideline for the likely costs of implementing ESMMP**

**Table 8.1: An indication / guideline for the likely costs of implementing ESMMP**

Item	Area or unit	Rate per unit in UGX	Total cost in UGX	Remark
Enhancing positive impacts to the host community (Health, Water etc)	30% of the benefits to refugees to be given to host community	-	-	As per the budget of the OPM and implementing partners
Sensitization of both the refugees and the host community	Various aspects	Lump sum per year	24,000,000	As per the budget of the OPM and implementing partners
<b>HIV/AIDS sensitization and clinic - Lump sum</b>				
Hire of HIV/AIDS NGO and Provision related services for one year	Counselors, health workers and accessories	Lump sum per year	60,000,000	As per the budget of the OPM and implementing partners
Radio announcements and Notices for sensitization	Different stations, flyers and notices	Lump sum per year	18,000,000	As per the budget of the OPM and implementing partners
Clinic and relevant drugs	Adequate for one year	Lump sum	120,000,000	As per the budget of the OPM and implementing partners
<b>Others</b>				
Facilitation of Refugee Councils and Environment Liaison Unit	Yearly	Lump sum	6,000,000.00	As per the budget of the OPM and implementing partners
Environment Specialist for the Settlement	Yearly	1,500,000	18,000,000	As per the budget of the OPM and implementing partners
Monitoring Plan	Per diem for 1	5 days per	2,600,000	As per the budget of the

<b>Item</b>	<b>Area or unit</b>	<b>Rate per unit in UGX</b>	<b>Total cost in UGX</b>	<b>Remark</b>
(ESMP) inclusive of institutional collaboration. The collaborating Institutions include NEMA, District Environment Offices, as well as the Implementing Partners	monitoring officer	quarter (four times a year) at 130,000 per day		OPM and implementing partners
	Fuel costs	30 litres per day of monitoring per vehicle	24,000,000	As per the budget of the OPM and implementing partners
	Communication and reports production	Lump sum	2,000,000	As per the budget of the OPM and implementing partners
<b>Total</b>			<b>274,600,000</b>	<b>This Total is limited to implementation of the ESMMP and excludes that for mitigation measures</b>

## **8.6 Plan for Implementation of Mitigation/Enhancement Measures**

These implementation measures must be read in the context of the mitigation measures discussed in the previous paragraphs.

**Table 8.2: Table showing Environment Management and Monitoring Plan**

Item	Environmental Impacts	Mitigation Measures	Responsible Party/implementer (Who)	Site of Implementation (Where)	Optimal Timing for Implementation (When)	Monitoring Indicators	Monitoring (Who)
1	Contribution to enhancement of Water and health facilitation to Host Community.	<ul style="list-style-type: none"> <li>➤ Provide at least 30% of the water improvement resources to the host community outside of the Settlement.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The OPM and Implementing Partners;</li> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤ In the Sub counties surrounding the Settlement (Nkoma and Bwizi);</li> </ul>	<ul style="list-style-type: none"> <li>➤ At the time support is extended to the Settlement;</li> </ul>	<ul style="list-style-type: none"> <li>➤ No of Water sources provided, and people receiving treatment;</li> <li>➤ Percentage of Budget spent;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ UNHCR</li> </ul>
2	Enhancement of agricultural production and increased labor resources;	<ul style="list-style-type: none"> <li>➤ Provide extension support to the settlers, and involve local councils when exchanging labor;</li> </ul>	<ul style="list-style-type: none"> <li>➤ The OPM and Local Councils / Refugee Councils;</li> </ul>	<ul style="list-style-type: none"> <li>➤ At the refugee Settlement and surrounding villages;</li> </ul>	<ul style="list-style-type: none"> <li>➤ During field preparation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Number of extension visits,</li> <li>➤ Records by extension worker</li> </ul>	<ul style="list-style-type: none"> <li>➤ Settlement Commandant , and LCs</li> </ul>
3	Climate Change concerns and air pollution within dwellings;	<ul style="list-style-type: none"> <li>➤ Increased sensitization;</li> <li>➤ Continue marking of trees;</li> <li>➤ Increased use of energy saving cooking stoves;</li> <li>➤ Implement a comprehensive tree planting programme in accordance with the land use zoning;</li> <li>➤ Separate animal accommodation as well as cook places from living quarters;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM and Base Commandant</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within the Settlement and in settlers' dwellings;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Mark trees before allocation of plots;</li> <li>➤ Tree planting to be continuous;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Number of trees marked and or planted;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM and implementing Partners</li> </ul>
4	Hazardous and Non	<ul style="list-style-type: none"> <li>➤ Put in place a program</li> </ul>	<ul style="list-style-type: none"> <li>➤ Local</li> </ul>	<ul style="list-style-type: none"> <li>➤ Around</li> </ul>	<ul style="list-style-type: none"> <li>➤ All time;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Availability</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM,</li> </ul>

	Hazardous waste;	<p>to minimize /reduce, re-use and recycling waste ;</p> <ul style="list-style-type: none"> <li>➤ Make use of landfills or use organic waste to produce compost;</li> <li>➤ Put in place centralized collection containers for used torch batteries and dispose at a NEMA approved disposal area, or sold off to those who recycle them;</li> <li>➤ Ensure there are incinerators for disposal of medical waste;</li> <li>➤ Encourage organic farming and use chemical fertilizers in long term with support from the Settlement Extension personnel;</li> <li>➤ Waste management will be linked with an awareness campaign.</li> </ul>	<p>Refugee Councils</p> <ul style="list-style-type: none"> <li>➤ Base Commandant;</li> <li>➤ OPM</li> </ul>	homesteads and Base camp;		<ul style="list-style-type: none"> <li>➤ of land fill</li> <li>➤ Number of collection containers;</li> <li>➤ Records of hazardous materials collected;</li> </ul>	Implementing Partners and the Local Councils
5	Agriculture and Soil Conservation	<ul style="list-style-type: none"> <li>➤ Sensitize the Community on reduction of soil erosion.</li> <li>➤ No Agricultural Activities will be permitted in open wetlands, Riverine</li> </ul>	<ul style="list-style-type: none"> <li>➤ Base Commandant, Refugee Councils;</li> </ul>	➤ In the Settlement;	➤ Continuously;	<ul style="list-style-type: none"> <li>➤ Number of sensitization meetings;</li> <li>➤ Number of hedge barriers planted;</li> </ul>	➤ OPM, Implementing Partners and the Local Councils

		<p>forests, KGR buffer zone and Rocky hill slopes;</p> <ul style="list-style-type: none"> <li>➤ Promote hedge barrier planting using tree and/or grasses following contour lines;</li> <li>➤ To conserve land, free ranging livestock will be discouraged in favor of “zero grazing”;</li> <li>➤ Promote Tree planting using local <i>Leguminosae</i> species and/or fast growing species;</li> </ul>					
6	Fragile Ecosystems including woodlands, wetlands and protected areas;	<ul style="list-style-type: none"> <li>➤ Strictly implement the land use zones which have been proposed;</li> <li>➤ The OPM / the RS to work closely with the UWA to strengthen patrols along the Game Reserve boundary;</li> <li>➤ Maintain a buffer zone of at least 500 metres to separate the Game Reserve;</li> <li>➤ The RS will study the feasibility of planting fruit trees in the buffer zone</li> <li>➤ The management will</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM;</li> <li>➤ UWA;</li> <li>➤ Implementing Partners;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Along the Reserve Boarder;</li> <li>➤ Within the Settlement;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Continuously;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Presence of the Buffer zone;</li> <li>➤ Presence of patrols;</li> </ul>	<ul style="list-style-type: none"> <li>➤ UWA;</li> <li>➤ OPM;</li> <li>➤ Implementing Partners;</li> </ul>

		<ul style="list-style-type: none"> <li>list endangered or listed species for conservation;</li> <li>➤ Identify all wetlands within the Settlement and make it known to the refugee community;</li> <li>➤ Relocate those refugees who have settled within 50 metres of the wetlands and ensure no agricultural activities there in;</li> <li>➤ Prohibit bush burning especially in wetlands;</li> </ul>					
7	Deforestation and the need to meet firewood demand;	<ul style="list-style-type: none"> <li>➤ Designate specific zones within the project area which are to be maintained for forestation; while settlers are encouraged to plant trees along the edges of their land and some other specified areas;</li> <li>➤ Plant mostly local <i>Leguminosae</i> species and/or fast growing species to maintain or increase crop production and conservation of soil;</li> <li>➤ Plant firebreaks to protect forested areas</li> <li>➤ Sensitize communities</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Implementing Partners;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within the Settlement ;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Zones to be designated early in the process;</li> <li>➤ The rest continuously;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Presence of the zones;</li> <li>➤ Presence of planted trees;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM;</li> <li>➤ Implementing Partners;</li> </ul>

		to detect and destroy evasive species;					
8	Land use, Population and Settlement issues;	<ul style="list-style-type: none"> <li>➤ Expose the Land use Master Plan to all stakeholders;</li> <li>➤ Open boundary of protected area and that of RS and Plant the buffer zone Between the KGR and RS with trees which were originally indigenous to the area.</li> <li>➤ Where appropriate Nationals who are to be evicted from the Settlement should be compensated in accordance with the law after conducting an Abbreviated Resettlement Action Plan (ARAP);</li> <li>➤ Government to identify and follow up those who were displaced and determine whether their new places are not in conflict with the environmental laws</li> <li>➤ Sensitize the local community about Family planning /Control measures and provide appropriate</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM;</li> <li>➤ UWA;</li> <li>➤ Implementing Partners;</li> <li>➤ Base commandant</li> </ul>	<ul style="list-style-type: none"> <li>➤ In Settlement and at boundary;</li> </ul>	<ul style="list-style-type: none"> <li>➤ At the beginning and continuously;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Lists of those evicted;</li> <li>➤ Presence of buffer zone;</li> <li>➤ Number of children in schools;</li> <li>➤ Number of sensitization meetings;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM;</li> <li>➤ Implementing Partners;</li> </ul>

		<p>birth control / contraceptive approaches;</p> <ul style="list-style-type: none"> <li>➤ Ensure that all school going children actually go to school in line with the National Policy of UPE;</li> </ul>					
9	Health Concerns;	<ul style="list-style-type: none"> <li>➤ The Health Centre III will be upgraded to Health Centre IV status with more outreach clinics such as Health Centre IIs and Health Centre Is;</li> <li>➤ In the meantime Nationals should continue to benefit from supplies availed to the refugee community and the 30% rule may continue to apply;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Implementing Partners</li> </ul>	<ul style="list-style-type: none"> <li>➤ At Health Centres and among the neighboring population;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Continuously;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Presence of Health Centres</li> <li>➤ Percentage of budget to the Nationals;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Ministry of Health , OPM, implementing Partners; list</li> </ul>
11	Water Concerns	<ul style="list-style-type: none"> <li>➤ Conduct water and water sources analysis to ensure portability;</li> <li>➤ Through sensitization encourage Rain Water Harvesting;</li> <li>➤ Plan to conduct an adequate hydro geological survey to confirm sustainability;</li> <li>➤ Develop an appropriate management and monitoring system of</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Implementing Partners</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within the Settlement;</li> </ul>	<ul style="list-style-type: none"> <li>➤ As required;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Results of the analysis;</li> <li>➤ Presence of the Plan;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ MWE</li> <li>➤ Implementing Partners;</li> </ul>

		<p>water quality and quantity;</p> <ul style="list-style-type: none"> <li>➤ In future explore the possibility of exploiting the nearby Katonga River as a source for both domestic water and water for production;</li> </ul>					
12	Sanitation Concerns:	<ul style="list-style-type: none"> <li>➤ Human Settlements to respect a 50 meters buffer zone around streams and wetland ecosystems;</li> <li>➤ Latrines with Reusable light latrine floor concrete / Plastic slabs to be sunk downstream of wells and to be at least 30 meters from any groundwater source;</li> <li>➤ Each household /family unit to have own latrine;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Implementing Partners</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within the Settlement;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Continuously ;</li> </ul>	<ul style="list-style-type: none"> <li>➤ No. of latrines constructed;</li> <li>➤ Distance of homes from wetlands;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM;</li> <li>➤ Local Government;</li> </ul>
13	Education Concerns	<ul style="list-style-type: none"> <li>➤ Sensitize the refugee community on the need to take their children to school and eventually compel them to do so;</li> <li>➤ Increase the number of classrooms and teachers to accommodate the increasing number of</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM;</li> <li>➤ MoES</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within the Settlement;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Continuously ;</li> </ul>	<ul style="list-style-type: none"> <li>➤ No. of classrooms</li> <li>➤ Sensitization meetings;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Implementing Partners</li> </ul>

		<ul style="list-style-type: none"> <li>➤ school going children;</li> <li>➤ The Settlement to provide land for those who may wish to establish privately run schools in order to support government efforts;</li> </ul>					
14	Potential for enhanced poaching due to acquired / adapted Eating Habits and Traditional Delicacies	<ul style="list-style-type: none"> <li>➤ Sensitize the community about the need to protect wildlife and the fact that poaching of wild game is illegal;</li> <li>➤ The Settlement management will work closely with the UWA to discourage poaching of wildlife;</li> <li>➤ Refugees will be encouraged to keep domestic birds to fulfill the need for bird meat;</li> </ul>	<ul style="list-style-type: none"> <li>➤ UWA</li> <li>➤ OPM</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within Settlement and along the Wildlife Reserve;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Continuously;</li> </ul>	<ul style="list-style-type: none"> <li>➤ Reports of poaching incidents;</li> <li>➤ Sensitization meetings;</li> </ul>	<ul style="list-style-type: none"> <li>➤ UWA</li> <li>➤ OPM</li> </ul>
16	Construction of Base Camp	<ul style="list-style-type: none"> <li>➤ Ensure waste management facilities are in place;</li> <li>➤ Plant appropriate trees within the camp to protect it from soil erosion and wind damage;</li> <li>➤ As much as possible practice rain water harvesting;</li> <li>➤ Separate hazardous waste from organic</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Base Commandant;</li> </ul>	<ul style="list-style-type: none"> <li>➤ At Base Camp</li> </ul>	<ul style="list-style-type: none"> <li>➤ At the time of construction and continuously thereafter</li> </ul>	<ul style="list-style-type: none"> <li>➤ Number of facilities in place;</li> </ul>	<ul style="list-style-type: none"> <li>➤ OPM</li> <li>➤ Base Commandant</li> </ul>

		waste and dispose in line with Waste management regulations;					
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## **9 PUBLIC CONSULTATIONS AND DISCLOSURE**

Public participation process in the ESIA study is particularly designed to provide sufficient, accessible and objective information to Interested and Affected Parties (I&APs) and stakeholders to assist them participate in related discussions and make their concerns known to the study team. Due to the time constraints, only a limited number of stakeholders were consulted during the RS ESIA process.

This chapter presents the approach and implementation of the consultation process for the Rwamwanja Settlement in Kamwenge District. Consultations covered representatives and stakeholders from Kyenjojo and Kamwenge Districts and at the National Level.

A number of benefits have been highlighted and this Environmental Impact Statement proposes measures to enhance these benefits as they affect the stakeholder community (both the Refugees and the Host Community). The statement also proposes ways to mitigate the negative environmental impacts which have been identified there in. Mitigation measures and an implementation plan have been proposed to ensure that the development is done within the confines of the law with minimum damage to the Social Environment.

If the proposed mitigation measures are enforced, the development may go on without significant long-term impacts to the neighbouring communities and environment.

### **9.1 Objectives of the consultations**

Stakeholder consultations were initiated with the following specific objectives:

- To generate a good understanding of the Rwamwanja Refugee Settlement Project thus ensuring that the impacted communities (especially the Host Community) do identify themselves with the Settlement at an early stage for easy coexistence;
- To assist the OPM lifetime of the Settlement;
- To understand and distinguish the potential environmental, socio-economic and health impacts of the Settlement / project;
- To develop effective mitigation measures and management plans;
- To optimize local benefits that can be delivered through the Refugee Settlement; and

- To enable affected communities to provide views; hence participating in the formulation and refinement of the Settlement Program;
- To ensure that both men and women are fully involved in the project.

## **9.2 Stakeholder Identification**

In order to develop an effective stakeholder involvement programme it was necessary to determine the right stakeholders. The stakeholders in this case are all the interested as well as those affected parties to and by the Settlement project. Such will include "any individual or group who is potentially affected by the Settlement or can themselves affect a project"

Apart from meeting most of the potentially impacted people, other stakeholders were identified and consulted both during the scoping and the actual studies. The main stakeholders identified were the Local Government Administration (for the Districts of Kyenjojo and Kamwenge). Grassroots people were consulted through Consultative Meetings, targeted questionnaires and interviews. A List of the contacted people is provided as Annex 4to this report.

## **9.3 Overview of the Consultation Process**

Prior to the start of the consultations, literature review covering UNHCR Operational Guidelines, Relevant Laws and Regulations was carried out. Discussions were held with the two District Headquarters of Kyenjojo and Kamwenge on the potential impacts of the Rwamwanja Settlement. Alternative refugee Settlement scenarios were discussed.

A selected number of elders at grassroots level, in Nkoma and Mwizi Sub Counties, were interviewed while most others were consulted, through questionnaires. Both men and women responded to the consultative meetings as may be seen from the figures below. Figures 9.1 – 9.5 show the consultation meetings within the Settlement

**Figure 9.1: Consultation meetings within Rwamwanja Settlement**



Fig 9.1: Consultation meetings at the Kyempango Mobile Clinic, RS



Fig 9.2: Consulting an Elders meeting



Fig 9.3: Consulting an elder



Fig 9.4: Consulting farming community



Fig 9.5: Filling questionnaires for selected refugees

#### 9.4 Concerns Raised in the consultation Process

Minutes of the meeting are attached as Annex 5. From the discussions, it would appear that different groups of people had different concerns sometimes in contradiction to each other.

The different group included the Local Government people, the RS Officials, the refugees, the elders and the overall host community outside of the RS.

#### **9.4 Disclosure Process**

Further, to the disclosure of the Scoping Report, the draft final Statement will be shared with stakeholders especially key Lead Agencies and the Local Government and the feedback will be obtained as appropriate.

Specifically, the first disclosure done by NEMA is through seeking comments from stakeholders and lead agencies on first the Scoping Report and then on the submitted ESIA Statement. These make key contributions to the reports through NEMA. The second if the Lead agencies, NEMA or a significant part of the stakeholders consider the project / approach / methodology to be controversial then a Public hearing will be arranged before a certificate of approval is considered (however this is deemed to be most unlikely since the scoping report did not indicate any controversial responses after it was exposed to the lead agencies by NEMA). The third disclosure shall be done by the funder, UNEP, UNHCR and IUCN in accordance with their Social Safeguards and disclosure requirements.

Following the approval by the Authority, copies of Statement will be kept at the respective District Local Government offices with the District Environment Office, with the project manager (OPM) and any other stakeholder who may wish to ensure that the mitigations as approved are being implemented.

Briefly then, the Environmental Impact Statement will be disclosed at several levels. The first disclosure is through seeking comments from stakeholders and Lead Agencies and NEMA. The second disclosure level is if the Lead Agencies consider it controversial then a Public hearing will be arranged before a certificate of approval is considered. The Contributing Funders (UNEP, UNHCR and IUCN) may also wish to disclose the statement in accordance with their own procedures.

#### **9.5 Complimentary Initiatives**

A number of initiatives have been proposed to ease the livelihood for the host community as well as the settling refugees. For example, the Settlement Commandant has evolved a policy that at least 30% of the support to refugees should be given to the host community. This is already operational with respect to the following:-

- Water: - 30% of the boreholes will be sunk in the surrounding villages

- Health: The host community are free to use the health facilities provided to the refugee community (Although some of the host community claimed that they are discriminated against)
- Seedlings: 30% of the tree seedlings are distributed to the host community;
- Job: Every effort is made to allocate some jobs to the local host community as much as they encourage the refugee community to work for money;

## **10 CONCLUSION**

This report highlights the potential impacts to the environment particularly as they relate to the operation and management of the Rwamwanja Refugee Settlement. Although a number of alternatives were disclosed, the one that the Government had chosen prior to the study is the very one that has been developed further. Subsequently a number of potential impacts were discussed and appropriate mitigation measures proposed. Due to resource constraints, it was not possible to visit all the neighbouring districts and to exhaust the potential stakeholders.

Nevertheless it is proposed that after every 5 years, an audit of the project be conducted by a NEMA registered Environmental Auditor to confirm compliance. The proposed mitigation measures are the minimum since for some impacts such as the deforestation risk the likelihood has been found to be certain. The mitigations can only minimise this impact otherwise it is certain that deforestation will occur.

Finally, not withstanding this EIS, any other developments that are proposed within the Settlement will be required to undergo a full EIA if they fall under Schedule Three of the National Environment ACT.

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## ANNEXES

### Annex 1: Field work programme

	Date	Time	To Meet	Activity
1	23/11/2012	10.00am	Team at IUCN HQ	Discuss schedule and plan activities
2	26/11/2012	8.00am	N/A	Depart from IUCN by 8.00am
3			Meet CAO and LCV Kyenjojo to get views	Aim to arrive at Kyenjojo District by 12.00 and Rwamwanja Settlement before 2.00pm
4		2.00pm	Base commandant	Work out schedule for the next three to four days (based on our proposal)
5		3.00pm	Meet the Sub County chiefs of Nkoma and Bwizi	Work out the schedule for the next four days (based on our proposal)
6		5.00pm	To retire to either Kyenjojo or Kamwenge	
7	27/11/2012	9.00am	Part of the team to serve questionnaires to Refugee Welfare Council (RWC) leaders, the other part to start field work	Base commandant to help in mobilizing the RWC leaders who will share experience and fill questionnaires
8		2.00pm	Part of the team to continue serving questionnaires to Refugee Welfare council leaders, the other part to continue with field work	
9	28/11/2012	9.00am	Part of the team to continue serving questionnaires to Refugee Welfare council leaders, the other part to continue with field work	
10		2.00pm	Research assistants to continue with questionnaires while the senior part visits the District H/Q at Kamwenge	At the district we see the CAO, LCV, Environment Office, Community Development Officer etc
11			Rest in Kamwenge	
12	29/11/2012		Questionnaire outside the camp (Nkoma and Bwizi Sub Counties with respective parishes) and continuation of field work	Sub County chiefs to arrange the meetings
13	30/11/2012		Questionnaire outside the camp (Nkoma and Bwizi Sub Counties with respective parishes) and continuation of field work	

14			ENEP, UNHCR and IUCN team to visit the CAO, LCV Kyegegwa on way back	
15				
16	3/12/2012		Sociologist to continue with consultations in Rwamwanja	
17	3/12/2012		Identification of gaps by sociologist in Rwamwanja and neighboring districts	

**Annex 2: Plant List of all recorded specimen (80) – recorded by Dr Urs Bloesh**

<b>Vascular plants recorded at Rwamwanja (27-30 November 2012)</b>		
<b>Plant name</b>	<b>Local/common name</b>	<b>Family</b>
<i>Abrus precatorius</i>		Fabaceae
<i>Abutilon mauritianum</i>		Malvaceae
<i>Acacia abyssinica</i> subsp. <i>abyssinica</i>	Umunyinya	Mimosaceae
<i>Acacia brevispica</i>		Mimosaceae
<i>Acacia hockii</i>		Mimosaceae
<i>Acacia sieberiana</i>	Umunyinya	Mimosaceae
<i>Acanthus pubescens</i>		Acanthaceae
<i>Aframomum angustifolium</i>		Zingiberaceae
<i>Albizia adianthifolia</i>	Umusisa, Umusebeya	Mimosaceae
<i>Albizia glaberrima</i> var. <i>glaberrima</i>		Mimosaceae
<i>Allophylus abyssinicus</i>		Sapindaceae
<i>Aloe volkensii</i>		Liliaceae
<i>Aneilema</i> sp.		Commelinaceae
<i>Asparagus flagellaris</i>		Liliaceae
<i>Bersama abyssinica</i> subsp. <i>abyssinica</i>		Melianthaceae
<i>Bidens pilosa</i>	Blackjack	Asteraceae
<i>Brachiaria decumbens</i>		Poaceae
<i>Caesalpinia decapetala</i>		Caesalpiaceae
<i>Cajanus cajan</i>	Congo pea, pigeon pea	Fabaceae
<i>Cassia didymobotrya</i>		Caesalpiaceae
<i>Cassia hirsuta</i>		Caesalpiaceae
<i>Cassia mimosoides</i>		Caesalpiaceae
<i>Combretum molle</i>	Umurama	Combretaceae
<i>Commelina africana</i>		Commelinaceae
<i>Conyza</i> sp.		Asteraceae
<i>Croton dichogamus</i>		
<i>Croton macrostachyus</i>		Euphorbiaceae
<i>Cymbopogon citratus</i>	Citronella	Poaceae
<i>Cymbopogon nardus</i>		Poaceae
<i>Cynodon dactylon</i>		Poaceae
<i>Cyperus papyrus</i>	Papyrus	Cyperaceae
<i>Eleusine indica</i>		Poaceae
<i>Entada abyssinica</i>		Mimosaceae
<i>Eriosema</i> sp.		Fabaceae
<i>Erythrina abyssinica</i>		Fabaceae

<i>Euphorbia tirucalli</i>		Euphorbiaceae
<i>Ficus thonningii</i>		Moraceae
<i>Flueggea virosa</i>		Euphorbiaceae
<i>Grewia similis</i>		Tiliaceae
<i>Grewia trichocarpa</i>		Tiliaceae
<i>Harungana madagascariensis</i>		Clusiaceae
<i>Hibiscus</i> sp.		Malvaceae
<i>Hyparrhenia filipendula</i>		Poaceae
<i>Indigofera arrecta</i>		Fabaceae
<i>Indigofera</i> sp.		Fabaceae
<i>Keeita gueinzii</i>		Rubiaceae
<i>Kyllinga bulbosa</i>		Cyperaceae
<i>Lantana camara</i>		Verbenaceae
<i>Leonotis nepetifolia</i>		Lamiaceae
<i>Leucas leucocephala</i>		Lamiaceae
<i>Macaranga kilimandscharica</i>		Euphorbiaceae
<i>Maesa lanceolata</i>		Myrsinaceae
<i>Mariscus</i> sp.		Cyperaceae
<i>Mimosa pigra</i>		Mimosaceae
<i>Monechma subsessile</i>		Acanthaceae
<i>Neoboutonia macrocalyx</i>		Euphorbiaceae
<i>Ocimum</i> sp.		Lamiaceae
<i>Panicum maximum</i>		Poaceae
<i>Paspalum notatum</i>		Poaceae
<i>Pennisetum purpureum</i>	Elephant grass	Poaceae
<i>Phoenix reclinata</i>	African wild date palm	Arecaceae
<i>Phytolacca dodecandra</i>	Umuhoko	Phytolaccaceae
<i>Platyserium elephantotis</i>	Elephant's Ear fern; amatu ga ba kaikuru	Polypodiaceae
<i>Polyscias fulva</i>		Araliaceae
<i>Psidium guava</i>	Guava	Myrtaceae
<i>Rhus natalensis</i>		Anacardiaceae
<i>Ricinus communis</i>		Euphorbiaceae
<i>Sapium ellipticum</i>	Umusasa	Euphorbiaceae
<i>Schrebera alata</i>		Oleaceae
<i>Sesbania sesban</i>		Fabaceae
<i>Setaria aurea</i>		Poaceae
<i>Solanum incanum</i>		Solanaceae
<i>Spathodea campanulata</i>		Bignoniaceae
<i>Sporobolus pyramidalis</i>		Poaceae
<i>Sterculia dawei</i>		Sterculiaceae

Tagetes minuta		Asteraceae
Themeda triandra		Poaceae
Tithonia diversifolia		Asteraceae
Waltheria indica		Sterculiaceae
	Ikimenamabuye, Umwata mabale	

Annex 3: Questionnaire Used to sample social characteristics

**SOCIAL IMPACT ASSESSMENT QUESTIONNAIRE FOR EA STUDY FOR THE PROPOSED RJA SREFUGEE SETTLEMENT CAMP**

**CONSULTANT: RWENZO – GREEN ASSOCIATES LTD**

Names of Enumerator..... Serial Number .....Date.....

<b>Section 1: Personal Identification</b>							
1) Project Affected Person	2) Age years	3) Sex	4) Marital Status	5) Highest level of Education	5) Tribe	6) Occupation	7) Religion
		1 =Male 2=Female	1=Married 2=Single 3=Divorced / separated 4=widowed	1=none 2=primary4 3= primary 7 4= Secondary 5=Post secondary			1=Catholic 2=Anglican 3=Pentecostal 3=Muslim 3=Traditional

<b>Section 2: Location of Information</b>				
8) Nationality	9) Sub-County	10) Parish	11) language spoken	12) specify main language
1=Ugandan 2= Congolese 3=Rwandese 4=OPther			1=English 2=Kinyarwanda 3=Rutoro 3=Runyankore 4=kinyabwisi 5=Other (specify)	

<b>Section 3: Ownership and Particulars of the Affected Person</b>						
13) if not a refugee, What is your status in relation to the Land ownership?	14) How did you acquire this land?	15) If not a refugee, Do you possess evidence of ownership? Such as?	16) How do you hold this land?	17) For how long have you been on this affected plot?	18) Is there any encumbrances on this land like;	19) if not a refugee, What is land tenure system here?
1= Owner 2= Licensee 3= Tenant	1= Bought 2= Renting 3= Inherited 4= Given as a gift.	1= Land Title 2=Agreeme	1= In possession of title. 2= Inherited but no title. 3=Tenant on titled land. 4= On public land	1= Since birth. 2= 0-10 years 3=10-20 years 4= over 20 years	1= yes, Claim by: family members. 2= Yes, mortgage/lien. 3= No, all documents available. 4= No, and no documentation available. 5= I don't know 6= Other specify	1=Mailo 2=Communal 3=Freehold 4=Leasehold 5=Other

4= Co-owner 5= Co-Tenant 6= Others (Specify)	5= Just settled 6= Other (Specify)	nt 3=Tenancy	(customary) 5= Other Specify			

<b>Section 4: General Information concerning children</b>							
20) How many people live in H/H?		23) How many children are going to schools?		26) How many are in primary level?		29) Does this HH keep any animals or birds?	30) If yes, which animals?
						1= Yes 2= No	1= Birds Poultry 2= Piggery 3= Goats 4= Cows 5= Other (specify)
21) Male	22) Female	24) Boys	25) Girls	27) Boys	28) Girls		

<b>Section 5: Income of Affected Household</b>					
31) What is the Main Source of income of the household  1= Salary 2= Husbands Salary 3= Business on land 4= Business located elsewhere 5= Agriculture activity on affected land 6= Agriculture activity on land elsewhere 7= Refugee support from OPM 8= Other specify	32) What is the secondary source of income of the household  1= Salary 2= Husbands Salary 3= Business on land 4= Business located elsewhere 5= Agriculture activity on affected land 6= Agriculture activity on land elsewhere 7= Refugee support from OPM	33) What other activities generate income for this household 0=No other 1= Fishing 2= Hunting 3= Poultry 4= Other	34) Compared to other residents in this Parish, in what category of standard of living would you put this HH?  (Enumerator use discretion to judge)  1= Rich 2= Average 3= Poor 4= Very Poor	35) What would you estimate to be the total income for this HH (per month)	36) What is the function of your house?  1=Residential 2= Commercial 3= Rent 4=Livestock 5=Residential /commercial 6=Other (Specify)

	8= Other specify				

<b>Section 6: Health and Energy</b>					
<b>37)Is your land enough for the household food requirements?</b>	<b>38) What is the most common disease in your H/H?</b>	<b>39) Where do you get treatment from?</b>	<b>40) What is distance to nearest health Centre</b>	<b>41)What type of meat would you eat given a chance</b>	<b>42) What type of lighting do you use most?</b>
1=Not enough 2=Adequate 3= Not sure	1=Malaria 2= Diarrhea 3= Coughs/RTI 4=Worms 5=HIV/AIDS 6= Hernia 8=Other (Specify)	1=Hospital/Heath IV 2= Health Centre III 3= Health Centre II 4=Refugee centre 5= Traditional Healer 6=Self treatment 7=other (Specify)	1=0 – 1km 2= 1km – 2km 3= 2km – 3km 4=3km – 4km 5= Over 4 km	1= Beef 2= Goat 3= Buffallo 4=Game Meat 5= Wild game	1=Paraffin 2=Solar 3=Firewood 4= Torches 5= None

<b>Section 7: Agriculture and Water Sources</b>					
<b>43) What food crops do you have on your land?</b>	<b>44) What cash crops do you have on your land?</b>	<b>45) What is your source of domestic water?</b>	<b>46) What is the distance to your preferred water source?</b>		
1=Banana 2= Potatoes sweet 3= Cassava 4=Irish	1=Coffee 2= tea 3= Sugarcane 4=Vanilla	1=Protected Well 2= Borehole 3= River/swamp 4=Piped water	1=0 – 1km 2= 1km – 2km 3= 2km – 3km 4=3km – 4km		

5=Yams 6= Beans 7=Ground nuts 8=vegetables 9=Other (Specify)	5=Horticulture 6= Pine trees 7= Eucalyptus tree 8=Fruits 9=Other (Specify)	5= Rain water 6=Other (Specify)	5= Over 4 km		

Annex 4: Lists of the contacted people.

ENVIRONMENTAL IMPACT ASSESSMENT ON THE ASSESSMENT FOR RWAMWANJA REFUGEE CAMP WITH RWENZO GREEN ASSOCIATES LTD

DATE: 28/11/2012 List of Contacted Persons DISTRICT: Kamweng

No	Names	Sex	Sub County	Parish	Village	Designation	C
1	Michael Kadoma	M	Nkoma	Nkoma	Mahani	L.C.I. Clerk	
2	KASURA EMMAZUE	M	NKOMA	NKOMA	NKOMA	PARISH CHIEF	
3	Fwsiine Pidel	M	Nkoma	Kabesebe	Kabesebe	parish chief	
4	V. Rwomushama	M	Nkoma	Nkoma	Kungwa	Person	
5	Swila Kabab	M	NKOMA	NKOMA	Jomasiko	Person	
6	V. M. M. J. J.	F	NKOMA	NKOMA	BRSECamp	Volunteer	
7	NABASHIJA ELIAS	M	NKOMA	NKOMA	"	Volunteer	
8							

ENVIRONMENTAL IMPACT ASSESSMENT ON THE ASSESSMENT FOR RWAMWANJA REFUGEE CAMP WITH RWENZO GREEN ASSOCIATES LTD

DATE: 28/11/2012 List of Contacted Persons DISTRICT: Kamweng

No	Names	Sex	Sub County	Parish	Village	Designation	C
1	Taiti Charles	M	Nkoma	Nkoma	Nkoma	Taiti	
2	Brigogo ASTON	M	Nkoma	-de-	Kafalyabara	Brigogo	
3	Mr. Mugabe	M	Nkoma	Nkoma	Nkoma	Mr. Mugabe	
4	Balinda Edson	M	Bwizi	Bwizi	Bwizi	Balinda	
5	Emmett	M	Bwizi	Bwizi	Bwizi	Emmett	
6							
7							
8							

Annex 5: Minutes of meetings for the Rwamwanja Settlement ESIA

<b>Rwamwanja Settlement</b>	<b>Issues discussed</b>
Date & place held	Base camp, 8 <sup>th</sup> November 2012
Name & designation	Summary of discussion & Issues, comments
Mr. Mugenyi David, Base Commandant	<p>The refugees are from the DRC, there are 28287 individuals with approximately 12,621 households. Of these 60% are children and between 20 – 25% are women. There are Refugee Welfare Councils (RWC) that have been democratically elected with OPM performing as the returning Officer. There are ten people on each Council with at least 40% being women. These are RWC 1 at village level, RWC 2 at Zonal /Parish level and RWC 3 which is the overall leader at Sub County or Settlement level. The councils perform as a bridge between the OPM and the refugees.</p> <p>In addition there are support committees. These are the Defence Committee (Law and order), Food Management Committee, Health committee, Acts and Rights of Children Committee, Gender Based Violence Committee, Education Committee and Environment Committee (although this one was not yet in place at the time of the meeting).</p> <p>The relationship between the Local government and the Settlement was not yet good due to the land issues. As a way to address this, there is need to integrate some of the services with the host community in mind. These will include the hospital (Under OPM and UNHCR), Health Centre VI, Rwamwanja Health Centre II</p> <p>Water is a big challenge for the RS. So far 26 boreholes had been sunk with 11 boreholes due to be sunk. 30% of the interventions should go to the Host Community (this refers to Water, Education and health).</p> <p>Although the local leaders are seemingly hostile, the host community are not hostile. The local town is expanding and some intermarriages have been reported.</p> <p>Degradation is an issue and lack of firewood. This is apparent within Kyempango Village where refugees are encouraged to plant trees and the RS is planting eucalyptus trees. In addition the OPM is providing five seedlings per household and refugees should not settle within 50 metres of the</p>

	wetland.
<b>Rwamwanja Settlement</b>	
Date & place held	8 <sup>th</sup> November 2012
Name & designation	Summary of discussion and issues, comments raised
Mr Mugabirwo Forest Ranger 0774314792	The refugees are fluent in Swahili, Kinyarwanda and Kinyabwishi. Before the refugees came in, natural trees were many. All the refugees have a high demand for firewood yet at the same time the land given is small.
<b>Nkoma Sub County</b>	Nkoma Sub County H/Q, 8 <sup>th</sup> November 2012
Name & designation	Summary of discussion and issues, comments raised
Mr Mbonyebyona - Community Development Officer (CDO)	<p>As the trees for construction within the settlement are exhausted, then the refugees will move out of the settlement.</p> <p>The most affected is Nkoma Sub County where charcoal burning has started. There is no money that has been allocated for environment management at the sub county level and most councillors do not take environment to be a priority. When asked what he would do if he had the budget, he said that he would plant trees on all the Government land. Currently the refugees do not have land where to plant trees.</p> <p>It is necessary to first plant fast growing trees to address the firewood concerns. In the short term the OPM should buy the refugees firewood to save the remaining forests.</p> <p>So far the relationship between the refugees and locals is good, although hygiene and sanitation is a challenge. Some of the refugees do not want to use Pit latrines while a few do have them.</p> <p>Among the major challenges are the congested Health Centre II which serves over 60,000 people with the original population at 30,000 while the refugees population is about 30,000 and still growing.</p> <p>Local people complain that there is a preference towards treating of refugees and the answer is to double the facilities at the centre by upgrading it to a Hospital or Health Centre IV.</p>

	<p>The common diseases are malaria, dysentery and malnourishment which has been seen among new arrivals. However the health facility is doing a good job and the medicines are available.</p> <p>Poaching has been observed and is on the increase. Some refugees have already been arrested and taken to court. They did not know that it was an offence to kill animals in the KGR in Uganda.</p> <p>Finally the eviction of the nationals was not civil and this has brought bad blood between the settlement bosses and the nationals that were evicted.</p>
Kamwenge	
Date & place held	Kamwenge district H/Q, 9 <sup>th</sup> November 2012
Name & designation	Summary of discussion & issues, comments raised
LCV Chairperson	<p>The RS is a contested area and there is a case in court due to the eviction of nationals in the area. Economically the district has been affected due to loss of revenue and some people are not happy. This led to the district getting involved and H E the President has promised to put in place a committee of inquiry. At the same time the environment is under attack due to the current 28,000 refugees whose number is growing. As they grow crops they end into the swamps.</p> <p>The district needs to be involved especially in planting of trees in the area. These people destroy the environment deliberately because they are hunters.</p> <p>The locals are not getting enough Job opportunities yet the policy (according to Mr. Bafaki) is that 30% should go to Ugandans. This is not happening and it is embarrassing.</p> <p>The schools are only two which are not adequate and soon they will move out of the settlement. Secondly, their movement is not controlled and some of them move back into DRC. There is also a feeling that some of these so called refugees may be Ugandans taking advantage of the situation.</p> <p>There is a need to have a clearly gazetted Settlement and the RS should have a land title. The misplaced Ugandans were about 10,000 and together with the workers they could have also been up to 20 -30,000.</p>

Kamwenge District	
Date & place held	Kamwenge District H/Q, 9 <sup>th</sup> November 2012
Name & designation	Summary of discussion & Issues, comments raised
Mr. Magara Nicholas, 0772504183, Environment District Kamwenge. Officer,	<p>The owners of the land were resettled and are now complaining. They had land titles and had developed the area with cattle farms and agriculture. It is not known where these people are, most likely causing environmental destruction else where. Some of the key concerns now are</p> <ul style="list-style-type: none"> <li>➤ Only Pockets of natural vegetation will remain as the settlement goes on;</li> <li>➤ Charcoal is being harvested and is sold;</li> <li>➤ The OPNM does not have a budget for Nursery;</li> <li>➤ The UNHCR should enforce safeguards to protect trees;</li> <li>➤ The refugees are not controlled or known by the local government;</li> <li>➤ Plots should not be allocated within wetlands although there is evidence that they still do;</li> <li>➤ The Katonga Game Reserve is very close to the RS;</li> <li>➤ There is need to follow up the evicted Ugandans to know what they are doing;</li> <li>➤ The sanitation in RS is poor;</li> <li>➤ The likely impact on the Water table is not known</li> </ul>
Rwamwanja	
Date & place held	Base camp, 10 <sup>th</sup> November 2012
Name & designation	Summary of discussion & Issues, comments raised
Mugabi Leo Assimwe, Deputy Commandant and in Charge of Environment at RS	<p>The RS was reopened on 17<sup>th</sup> April 2012 and currently the population is about 30,000 people. The carrying capacity of RS is about 50,000. Up to now the OPM has planted 50,000 trees and there is a batch of 60,000 on the ground. The hills need protection as the refugees continue to put pressure on land.</p> <p>Some of the refugees are wealthy and have bought boda bodas and are conducting business. Yes there were some big farms by the illegal settlers. These include Mr. Chepkongin Chemaswet whose farm has now been taken over by the settlers.</p>
Kyenjojo District	
Date & place held	Kyenjojo District H/Q. 27 <sup>th</sup> Nov 2013

Name & designation	
Chief Administrative Officer (CAO) Kyenjojo District	The district has not received any report and was not involved in the exercise. However as a person I saw the traffic and I know that Kyenjojo District is a recipient of immigrants. I know that after the Rwandese refugees left, people from different areas reoccupied the place, labour camps were established and some people even got land titles for the plots they were occupying. He did not know how the eviction started but at the end those with cows who could not get immediate alternatives sold their animals cheaply and left. Some of the livestock was eaten up by the refugees. There is a high potential for conflict in the area.
Kyenjojo District	
Date & place held	Kyenjojo District H/Q. 27 <sup>th</sup> Nov 2013
Name & designation	RDC, Kyenjojo
Resident District Commissioner (RDC) Kyenjojo	There is need to co-own the forests which were left by the evicted people together with NFA. Or perhaps they can form community forests. The RS concern is a regional issue as the Batoro are complaining about their land. There are seven districts which have been impacted and presently the area is contested. As the number of refugees is high, land degradation will follow and this could lead to conflicts.
<b>Issues raised participating partners</b>	
AAH, 28/11/2012	Concerned with energy saving stoves in the RS. Most of the refugees are using firewood. So far up to 48 demonstration staff had been trained and by 25 <sup>th</sup> November 600 stoves had been constructed. 25 ToTs have also been trained. Cooking is done outside although a few cook from within the dwellings.
28/11/2012 IOM LWF UNICEF OXFAM	There are a few cultural problems regarding sanitation. Sanitation is poor with many having no latrines and those who have the pits are shallow (2Mts compared to Ugandan standard of 4Metres. So far they have jointly completed 28 operational boreholes and where there are no boreholes water trucking is done. This is very expensive
28/11/2012 World Vision	World Vision had analysed the gaps and came up with a number of interventions which include the following: - <ul style="list-style-type: none"> <li>• Established 10 child friendly spaces in Rwamwanja Settlement</li> <li>• Provided Coordination and advocacy with mandated</li> </ul>

	<p>agencies to provide care and support to Unaccompanied children</p> <ul style="list-style-type: none"> <li>• Constructed accommodation facilities for 6 health workers</li> <li>• Provided 2 delivery beds and 20 admission beds</li> <li>• Provided 10 weighing scales for growth monitoring of children</li> <li>• Provided warm clothing and shoes for 6,000 children</li> <li>• Provided 3000 family survival kits (3 blankets, 2 mosquito nets, plastic sheet, 2 saucepans 5 plates, cups, forks and spoons, 2 ladles, sanitary wear for ladies, soap, water container, machete, kitchen knife)</li> </ul>
28/11/2012 Forest officer at Nkoma (NAADS)	<ul style="list-style-type: none"> <li>• So far 100,000 trees had been planted, with 70% on RS while 30% on host community land</li> <li>• Poaching is an issue within Katonga Game Reserve</li> <li>• The key challenges include <ul style="list-style-type: none"> <li>○ Land degradation</li> <li>○ Lack of Building materials</li> <li>○ Marking of Trees</li> </ul> </li> </ul>
28/11/2012 Rwamwanja Market LC111 Chairman	<ul style="list-style-type: none"> <li>• The revenue from the market rates has fallen because the refugees do not have livestock which faces better revenue. The market rates vary from 12M – 15 Million shillings per year.</li> </ul>
28/11/2012 Tumusiime Davis Agricultural Adviser (Animal Husbandry)	<p>By 2011 the Ugandans had settled in RS. The Government was providing to all the villages in the RS with services. These included Rwamwanja and St Michael Primary schools. In General the Ugandans were keeping livestock while the Congolese were cultivating the land. Kyempango Village was for crops.</p> <p>Currently the refugees are not advised on agro practices and one needs permission to go there. The rate of burning charcoal is increasing. And the Congolese have been observed to be involved. This has extended to Bishozi parish.</p>
28/11/2012 Elder	<p>Before 1962, the place had a lot of wildlife including lions, buffaloes, elephants, Zebra, which have since moved. The first Rwandese started to come in around 1962 and they were cattle keepers while the locals were cultivators. It is remembered that those who were there at the time were registered and they included the following: -</p>

	<ul style="list-style-type: none"> <li>➤ Rwabwogo</li> <li>➤ Petero Kajuubu</li> <li>➤ Gershom Bikanga</li> <li>➤ Bikingooro</li> <li>➤ Katagura</li> <li>➤ Yafesi kato</li> </ul> <p>The Banyarwanda refugee population grew and at some point there was a conflict with some of them moving into the KGR. In 1994, when the Refugees left the number of vermin increased and it became an issue. In 1977, the Kingdom decreed that the land be given out and by 2012 the population was high and still some have remained.</p>
<p><b>28/11/2012</b> <b>Elder</b></p>	<p>Before 1062 there were indigenous people in Nkoma sub county. There were about 600 tax payers and about 60 households in the present settlement. The local chief felt that the place was under populated and he asked the King to bring in more people. This was done in 1964 and the Ministry of Culture and Community development was in charge. They established 15 zones across the settlement. By 1980, the population was high and some of them went outside the settlement which led to some conflicts. In 1982, the Minister in charge came to solve the matter by dividing the land. Some people did not like this solution leading to violence which left some people dead.</p> <p>The Rwandese left in 1994 and the Toro Kingdom took back their land which was parcelled to various people. 200 people were initially allocated from the Kingdom. Then people from other districts came in especially from Kiruhura, Ibanda, and Bushenyi Districts.</p> <p>Later in April 2012, these people were evicted and were replaced by the refugees. The refugees are many. These people ( the refugees) move in groups and can steal. Some have been caught stealing already.</p>
Kamwenge District	
Date & place held	27- 11-2012 Kamwenge District H/Q
Name & designation	
Eswilu Donath - Deputy Chief Administrative Officer (ACAO)	Many Agencies have responded to the present human need other than the long term effects of the settlement. However, the coordination between the district and those

	<p>agencies is poor. The office of the CAO is left out. There is a need to ensure sustainable use of natural resources. There are also issues of displacement and this matter is now before the courts of law. To date a number of boreholes have been sunk while the forest is being degraded. How sustainable is this? What are the alternatives to fire wood? There is likelihood for the area to be water stressed.</p> <p>The people are saying that Rwandese were better refugees since they were cattle keepers. These are taking out all the nutrients. The swamps and wetlands are also under threat.</p> <p>The office of the CAO should be the one to coordinate but currently the Sub County leader has been barred from the camp.</p> <p>There are some constraints including; -</p> <ul style="list-style-type: none"> <li>➤ Language</li> <li>➤ Refusal to vaccinate children</li> <li>➤ etc</li> </ul>
District planning team, Kamwenge district	<p>They raised some issues including the following: -</p> <ul style="list-style-type: none"> <li>➤ There is high degradation due to vegetation cover reduction;</li> <li>➤ Potential for losing indigenous species;</li> <li>➤ Charcoal burning is on and the <b>Combetrum</b> species is threatened;</li> </ul> <p>They proposed some rehabilitation measures including Agro forestry, Apiary, Multipurpose tree species;</p>
Fisheries Officer	<p>There is an environment policy in place but there is a lot of negativity since the district has been left out. There is a need to change the mind set so that the District can contribute. I believe there will soon be pit latrines everywhere in the RS and what will that mean for the water resources and environment? Have you considered that in future the refugees will revert to pesticides and other chemicals which would degrade the Katonga River?</p>
Entomologist	<p>Be keepers around the RS will be negatively impacted. The district is promoting coffee and areas around the RS will lack pollination. It is now essential to have more forests outside the settlement for sustainability.</p> <p>The Katonga River has been overfished and there are plans</p>

	<p>to restock it. Wont it be affected by the refugees. Can we fence the area?</p>
<p>29 – 11 – 2012 Technical Meeting of Implementing Partners</p>	<p><b>WATER:</b> The start was horrible but currently it is not so alarming. Up to 36 boreholes are planned although the sustainability is not known. The yield is on average 1,500 litres with the exception of one which has shown a yield of 6.5 cubic metres. This will be connected to a motorised pump. There is a need to practice water harvesting from schools and other roofs and in the long term the River Katonga should be considered as an important water source for RS.</p> <p>The bore holes will not be adequate in the long term with increased numbers of refugees. Government needs to be involved.</p> <p>As for Sanitation, a lot needs to be done as refugees do not have time to construct pit latrines.</p> <p><b>FUEL</b> The trees you see will be gone in less than 1 year. There is a need for an intervention (Energy saving stoves, tree planting by us and the refugees etc). They should also promote sustainable agricultural practices.</p> <p>The settlement need to plan for a population of 50,000 in the next 2to 3 years. On the other hand the distribution of seeds leads to more forest loss. We need to think of alternatives. Moreover the Congolese are also craftsmen using trees for all sorts of implements. May be we need to put a bye law in place that requires a refugee to plant up to 5 trees to qualify for refugee status.</p> <p><b>OXFAM</b> Oxfam came in under the emergence mode and now there is a need to move to the long term development mode. We consider the agronomic practices and the role of Government in all this. There should be a bye low requiring these people to demarcate their plots of land using agro forestry trees.</p> <p>We need to help the refugees to market their produce as a way of empowering them.</p>

	<p><b>IUCN</b></p> <p>There is a need for the refugees to understand the bigger picture. And this may be achieved by putting in engaging in participatory processes including involving full participation of refugees, host communities and implementing partners to put in place a model settlement with a different approach altogether. It will be good to reflect on the process of developing Community Environment Action Plans (CEAPs) to pick lessons for adapting to the Rwamwanja settlement.</p> <p>Waste management</p> <p><b>ADRA</b> has helped to put in place an Incinerator and Placenta Pit at the health centre.</p> <p>Otherwise, household refuse pits should be encouraged and in the future polythenes will become an issue. ADRA has in pace up to 39 extension workers to help support agricultural practices.</p>
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