

**HUMAN MIGRATION AND LAND MANAGEMENT IN KIBALE COUNTY-  
KAMWENGE DISTRICT, WESTERN UGANDA**

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**DECLARATION**

I **Twesigye Guidance**, declared that this research has been produced basing on my own knowledge and ability. And it has never been submitted to any University or other institutions of higher learning for the academic awards or any other qualifications.

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## APPROVAL

This research report has been submitted to the school of Engineering and Applied sciences as a partial requirement for the award of a degree of Bachelor of Science in Environmental management of Kampala International University, with my approval as a supervisor.

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Signature: .....

Date: .....

## **DEDICATION**

This work is dedicated to all people who are patriotic to their countries for sustainable land management - Uganda and world over.

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I thank God who gave me both the spiritual guidance and strength to pursue this project. I also thank him for giving me the knowledge and experience for carrying this tiresome research.

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## LIST OF ABBREVIATIONS

CEO'S	:	Chief executive officer
FOA	:	Food Agricultural Organization
GDP	:	Gross Domestic Product
HIV/AIDS	:	Human Immunodeficiency Virus/Acquired Immune Deficiency syndrome
IDP's	:	Internally Displaced Persons
NAADS	:	National Agricultural Advisory services
NEMA	:	National Environment management Authority
NFA	:	National Forestry Authority
NGOs	:	Non-Governmental Organizations
PNU	:	Part of National Unity
SID	:	Society of Internal Development
SLM	:	Sustainable Land Management
UN	:	United Nations
UNEP	:	United Nations Environment program
UWA	:	Uganda Wild Life Authority
VDC	:	Village Development Committee
W WF	:	World Water Forum
WASWC	:	World Association of Soil and Water Conservation

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## ABSTRACT

The research was set out to assess the effects of rapid human migration on land management in Kibale - County Kamwenge district, western Uganda. The study was carried out on objectives to assess a general analysis on forms of land degradation in Kibale County that could result from human migration; evaluating the forms land use patterns and land use in Kibale County; and identifying possible to be adopted in order to improve on land resource management in Kibale County Kamwenge district western Uganda.

The study involved a cross-sectional research design comprising of co-relational and participatory social methodologies; interviews backed by quantitative descriptions observations and questionnaires; and qualitative descriptions involving simple random sampling techniques.

The findings of the study showed that most people were in age of between 46-55 are said to be with the highest population. 65% of the total population were observed to be immigrants whereas, only 35% were the natives of Kibale County This was due to the most men at such an age take a responsibility of owning land. Generally the cases of land degradation started uprising from when rapid human migration started being identified Kibale county Kamwenge district western Uganda,

The researcher recommends that there is need for plan to have set strategies when intervening in times land management approaches; grassroots program implementation within the community which involves dealing with the constraints degradation to enhance economic development; and plan to enforce laws that checks on land degradation in Kibale County. The only way to achieve sustainable land management is to check on rapid immigration, family planning, community sensitization, public participation in environmental management in Kibale County.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

The history land as rich nature resource base has been the foundation of agriculture production in Uganda playing an important role in sustaining the growing population and the economy of Uganda (Opio-Odong, 1999). Land is the process of managing the use and development (in both urban and sub-urban settings) of land resources in sustainable way.

Land resources are used for a variety of purposes which may include organic agriculture, reforestation, water resource management and eco tourism projects. Also land management can be defined as the process of managing the use and land development and resource in a sustainable manner. Land resources have number of purposes which interact and compete with another, there fore it is desirable to plan and manage all uses in the integrated manner.(dale and Laughlin, 1988). However it is widely accepted that the land management is affected by the increasing in population, high rain fall, prolonged droughts, steep sloping and high land area (Bagoora, 1988).in modern attitude areas such as coffee farming zones, soil erosion and declining soil fertility and productivity occur. This may be the result of traditional forms of land management taking place in most parts of Uganda including Kibale County.

Uganda with the population of 31 million people, (Ministry of health report, 2010). over80% of this population engages in agriculture and out of this number 70% apply organic nature commonly known as Nakavundira to the other farm (ICRAF, 1997). Agriculture accounts for the 76% of the national gross development product and 97 percent of export earnings of the country. Concerns about proper land management started long before the colonial government such as that even some policies promoted by the colonial regime and later by donors in Africa rest on historical grounds, culturally constructed paradigms that at once describe a problem and prescribe its solution.(Bazaale, 2005)

Since 1937, the soil laboratory at Kawanda has been in charge of soil productivity research, soil surveys, and soil plant analysis. Migration from region to have created significant population

shifts thought out human history. Humans have moved and adapted to new environments and new cultures (Ann Keller Laura Klein 1999). Dense settlement and growing numbers pose a fundamental question will we exceed earth's carrying capacity for our species. Early in the industrial revolution (1760-1834), postulated that human populations, which can grow geometrically or exponentially, would exceed food supplies, which usually grow arithmetically or linearly. He predicted catastrophic human die off as result of this irreconcilable question leading to exploitation of new lands and its resources, migration does effect on land management (Salter, 1999).

This research therefore pointed out effects of rapid migration on land management in Kibale County. It further formulated strategies for land management practices in Kibale County.

### **1.2 Statement of the problem**

Migration has greatly impacted land management in Kibale County. De vegetation, soil erosion, declining productivity and loss of habitat, fragmentation among others are indictors of poor land management in Kibale county. The above problem has affected Kibale County with its population physically, socially and economically over the recent years.

Control measures like construction of trenches, mulching, organic manure, Agro- forestry, family planning, rotational cropping, and mixed cropping are being used practiced to improve land management in Kibale County. However, these measures are not very effective in controlling the problem s are further aggravated by the fact that, there is no systematic study documented a bout them in Kibale county. The researcher notes the Kibale county experiences land management but the role of rapid migrations in this land management is unclear.

### **1.3 Purpose of the study.**

The general purpose of this research intends to determine the effects of rapid migration (Bafuriki) on the land management in Kibale County. This was seen so overwhelming land and its resources Kibale County Kamwenge district western Uganda.

#### ***1.3.1 General objective***

The overall objective was to determine the possible sustainable ways of land utilization and other resources management in Kibale County in order to contribute to local and national development

#### ***1.3.2 Specific objectives***

- (i) To examine the causes of migration into Kibale county.
- (ii) To evaluate the form of land use patterns and land management in Kibale County
- (iii) To identify appropriate measures for land management in Kibale county.

### **1.4 Research questions**

- (i) What are the causes of migration into Kibale County?
- (ii) What are the forms of land managements and patterns in Kibale County?
- (iii) What could be the appropriate measures to improve on land management in Kibale County?

### **1.5 The scope of the study**

The was to determine the coverage and boundaries within which the study was conducted.

Conceptually the study was examining the effects of migration on land and appropriate measures used in land management in Kibale county Kamwenge district. And also to encourage Governments, business, civil society groups and individuals to undertake various project to support conservation of land by preserving the natural environment. While boosting at the same time, the livelihoods and income of local people and communities. This research only took a period of one month.

### **1.6 Significance of study**

This research provided basis for finding solutions to the existing rapid migration and land management problems in Kibale County. It also formulated strategies that can be used to improve on land management and productivity in order to enhance sustainable development in Kibale County.

The study raised key issues on the nature and indicators of land management in relation to migration.

This provides basis for those who will be interested in analyzing a related or similar problem in future. For example National Agriculture Advisory Services (NAADS), National Forestry Authority (NFA), Uganda wild life Authority (UWA), and Village development Committee (VDC)

Finally the study further provided solutions to the land management and that were to act as platform for debate and discussion in future. This promotes sustainable use of land not only in Kibale county but also elsewhere world over.

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.0 Introduction**

In this chapter, a review of some of literature on migration and land management in Uganda and else where in the world Specific interest areas on the soil and water conservation and understanding of the effects and causes of rapid migration in relation to sustainable land management will be given. The chapter reviews the works of the other scholars who have written about the topic of the study or those who have addressed similar issues as those of the variable that will be available in the study.

#### **2.1 Causes of migration**

Migration from one area to another in search of improved livelihoods is a key feature of human history. While some regions and sectors fall behind in their capacity to support populations, others move ahead and people migrate to access these emerging opportunities. There are various causes like political, cultural, social, personal and natural forces but aspire for betterment, higher earning, more employment opportunities receive special attention. There are four type of migration namely Rural-Rural, Rural-Urban, Urban- Urban, Urban-Rural.

Though all of these have different implication over the various demographic and socio-economic characteristics of the society but rural-urban and urban-urban migration is a cause of concern in reference to migration process to Jaipur urban agglomeration. The dynamics of migration for three census (2001) has been analyzed from different angles at destination i.e. Jaipur Urban Agglomeration. The peoples of two places have different socio-economic character like education attainment, availability of land to the rural labor and agriculture production capacity, industrialization etc and the difference of these factors at two places gear the migration process.

Both “push” and “pulls” stimulate international and internal migrations. Typically comes from economic hardship, which compels people to leave their community or even their country; the “pulls” comes from economic opportunity else where. During the great Depression of 1930s, farmers left the American dust bowl and headed in west in search for jobs.



The recession of 1981 brought another migration, this time mostly blue collar workers from mid west hoping for better times in oil rich state like Texas and Alaska. A hundred years ago, nearly half of the Irelands population was “pushed” out of the country by its great potato famine and “pulled” into the United States by its reputation for providing economic opportunity. Nowadays, there is world wide mass movement of people from various poor countries to more prosperous ones.

This was happening because after all poverty has been around from time immemorial. The answer is that we have had two revolutions. One is information revolution, which enables people, even if they are very poor to know what life is like in the other parts of the world. An other is transportation revolution, which makes it much easier than before for people to travel long distances (Kam, 1990)

Political and religious oppressions have pushed many people to brave the uncertainties of new land. Some 50 years ago, millions of Jews fled persecution in Nazi Germany. More, hundreds of thousands of Vietnamese and Cubans escaped communist oppression in their home land.

In the last few years, many Jews have left behind their oppressive lives in the Soviet Union, immigrating to Israel and United States. Hostility towards ethnic minorities throughout Eastern Europe in the aftermath of its recent revolution has also spurred migration, with, for example Romania’s ethnic Hungarians fleeing to Hungary and Bulgaria’s ethnic, Turks going to Turkey (Thio 1991)

## **2.2 wars**

People who are forced to flee their homes for one or more of the following reasons and where the state authorities are unable or unwilling to protect them: armed conflicts including civil war; generalized violence; and persecution on the grounds of nationality, race, religion, political opinion or social group.

Since the end of cold war there has also been an even dramatic increase in the number of internally displaced persons (IDPs), who are currently far outnumber the world’s refuge population. At the end of 2004, there were 11.5 million refuges and asylum seekers and a further

21 million IDPs world wide. (UN Report 2005).

Wars have been responsible for human migration settlement on land in most parts of the world today.

### **2.3 The Effects of Rural Migration on Land Resource**

Between 1957 and 2007, 800 million people world wide, moved from rural areas into cities, according to the United Nation's Food and Agricultural Organization. The moves are driven by War, poverty and drought, which can also compel people to move from one place to another.

In either case, heavy migration may ease the strain on land resources in the migrants' homelands, but it can also cause a number of new problems.

#### **2.3.1 Water**

In many part o the world, drinkable water is scarce resource. The world water Forum states that when rural residents migrate, the water may increase in their old homes, but not necessarily enough to solve shortages. Additionally, it can create new water shortages in the destination, which can lead to further migration (world water forum, 1999) In areas dominated by pastoralists people migrate in such of water and pasture for their animals.

#### **2.3.2 Farming**

The UN's population information Network, the effects of rural migration can reduce pressure on agricultural land and food supplies. However, the loss of farmers and farm workers in an area can also lead to a decline in agricultural yields. This, in turn, can lead to the remaining workers adopting unsustainable farming practices that increase land degradation (Fraser Sherman, 2007).

#### **2.3.3 Subsistence Crops**

According to the population information network points, the of rural migration on farming can be particularly bad for subsistence crops, which farmers to feed themselves rather than for sale. Family members who don't migrate normally exchange subsistence crops with their relatives who moved to urban areas in return for manufactured goods. If the exchange doesn't reward the

farmers enough to keep growing subsistence crops, they will grow less and the total food supply will decline (UN population information network 2009).

### ***2.3.4 Population Growth***

Population growth in many parts of the world already puts a huge strain on land resource.

The population information Network states that if migrant workers are able to bring in more children, replacing the workers who have migrated. This can lead to an increase in population and added demand on land resource. Population growth creates too much pressure land as resource un sustainable utilization land. This results in to land fragmentation, over cultivation which hinders land productivity in heavily populated areas.

### ***2.3.5 Environmental Degradation***

A 1990 study in "population and Development review" found that in Guatemala, as the population migrated from densely populated farming areas to wilder, less populated regions, deforestation, soil degradation, water shed destruction and urban areas sprawling out into prime agricultural land occurred (fresar Sherman 2009)

### ***2.3.6 Poverty***

Migration results into poverty, but it is not always the poorest who migrate, because of the costs and opportunities involved. And poverty may result from migration, both for the migrants in destination and families left behind, often mostly affecting women and children. At the same time, female migration can indirectly help alleviate poverty by raising the productivity, education and health of females and their families, all key to reducing inequality and poverty in the home.

## **2.4 Population Pressure and land fragmentation**

Meirer (1984), observes that the growing population pressure on land resource tend to become smaller and smaller. Farms are divided and further sub divided into tiny strips and plots.

This leads to agricultural unemployment in densely populated peasant communities.

The unemployment may take at least two basic forms.

- (a) Unemployment of peasant cultivators due to small size of farms.
- (b) Unemployment disguised fragmentation of the individual holdings

On theoretical view of the matter: it is clear that the excess population can be a threat to the land management especially when the marginal productivity of land is reduced to zero. This may even occur despite the fact that land management has to provide for demands like cash required to pay taxes, school fees, clothing, health care and bride price.

### **2.5 Land Degradation and Productivity**

Hills, (1993) Argues that at present, the main impact on the environment results from the interactions between climatic characteristics and ecologically unbalanced human interactions.

Hills continue to comment that poor land management processes usually develop in areas where the vegetation cover has been seriously damaged. He said that if erosion is not stopped or reduced further increase runoff, sheet and gulley erosion on sloping ground will ultimately destroy the productivity of land. Hills further argue that inadequate land use practices contribute largely to the acceleration of these degradation processes.

### **2.6 Land Management and Deforestation**

According to Hamilton A.C (1981), outlines human activities such as cultivation; livestock rearing, mismanagement of forests, population and demand for forest products like poles, fire wood, timber influence deforestation hence land resource depletion. The above view was supported by Anderson and Ingram (1993) that it is relatively rare to find sites in the tropics where the natural vegetation and soils have been disturbed.

Erosion is a serious threat sustainable land management in most areas in high lands because it poses cumulative off site problems of increasing dimensions UNEP (1987). However, IIED (1992), reports that there is a considerable confusion as to the actual status of land productivity erosion rates. Hard data concerning the extent rate of change and hazards of soil and degradation beyond plot level, study is lacking.

Wandera (1993) argues that pressure on arable land has also led to intensive and continuous

tilling of land with no fallow periods in some places consequently, poor land productivity per unit area has declined. He further comments that soil erosion was noted to be an important factor in environmental degradation due to poor land management and causes were identified as population pressure on land for agriculture.

## **2.7 Economic Development**

Prophero (1992), asserts that there is a complex relationship between people and environment. This is expressed particularly in agricultural practices, agricultural systems, land management, crop selection especially in Africa where economic development is directly related to advancement in agriculture. Therefore, the need to expand land productivity in Kibale County through land management is an important occupation of the people. This accelerates land clearance, overcrowding of crops in one field to increase productivity.

## **2.8 Technology in Agriculture**

Manners et al (1974) notes that in developed countries, the most important agents of land degradation are the processes leading to technological advancement and in developing countries the most important agents of environmental degradation are the socio economic and use rudimentary technology. In Kibale county cultivation is done in order to meet basic needs like food and pay taxes. However, rudimentary technology like the use of hoe which is in appropriate; is common practice under land management.

## **2.9 Intercropping and Fallowing**

Grisley W. and Mwesiga D (1994) shows that the percentage of land owned by a farming family is positively associated to decision regarding fallow and land management.

In the long run as population pressure on the land increases, farm land is more intensively intercropped thus significantly reducing the length of fallow periods. This

## **2.10 Sustainable Land Management measures**

Poor and inappropriate land management is the main cause of physical, chemical and biological degradation of cultivated land, pasture, range land and forest land. In many countries, especially

in sub Saharan Africa, there is continuous stress on land resources since up to 80% of the population depend on natural resources for their livelihood. Increasing pressure on resources, particularly in vulnerable regions has caused serious soil productivity decline especially under extensive farming practices. This is manifested by declining yields, decreasing vegetation cover, salinization, and fertility decline and increasing erosion. Food security related to the ability of land to support the population.

Reserving the degradation of soil, water and biological resources and enhancing crop and live stock production through appropriate land use management practices are essential components in achieving food and livelihood security. Successful experience for enhancing land productivity and maintaining water ecosystem services (biodiversity, water supply, carbon sequestration) in specific countries have taken place but their wider dissemination for benefit of other countries, even in the same region, is rather limited . There is urgent need to develop and implement sub regional and national programmes, as well as projects at community level to reserve land degradation and to improve land productivity.

Causes of land degradation are numerous and include decline of soil fertility, development of acidity, salinisation, alkalization, deterioration of soil structure, accelerated wind and water erosion, loss of organic matter and biodiversity. As a result, farm labour productivity and revenues from agriculture are falling, migration to urban areas is increasing, and rural poverty is exacerbated. Efforts to restore productivity of a degraded land must be coupled with efforts to recognize productive capacity of land resources.

There is a need to encourage countries to scale up already known SLM measures and continues to develop new updated land use systems to meet economic, environmental and food security goals. In this effort FAO collaborates closely with WOCAT and others. World overview of conservation Approaches and Technologies, launched in 1992, is a project of the world association of soil and water conservation (WASWC) in collaboration with several institutions and coordinated by the University of Bern, Switzerland. It aims to promote the integration of successful soil and water conservation approaches and techniques into land use systems world wide. FAO is involved in the ongoing regional workshops and data collection in Africa. The

Africa overview now is taking shape and will serve as an entry point for the initiative of the international scheme for rehabilitation of Africa lands (ISCRAL) on a country by country basis.

## CHAPTER THREE

### METHODOLOGY

#### **3.1 The Study Design**

A case study research strategy will be used to determine the relationship between migration and land resource management. The case study research strategy will be used in this project due to the fact that “the case study method allows the researcher to retain the holistic and meaningful characteristics of real-life events” (Kohlbacher, 2006). The findings anticipated therefore providing a clear picture of the magnitude of the problem of migration and how it is impacting land resource management. This study, the research design will be a descriptive cross-sectional qualitative one. This research design was chosen because of the time frame and the nature of the study. The following variables will be investigated during the study; migration, its causes and impacts on land management, what can be done to improve on land productivity, and the way forward.

#### **3.2 The Study Area**

The study area was conducted in Kibale county Kamwenge district which is located in western Uganda. Formally, it was of the greater Kabalole district. Kibale county district has borders with three districts which include Kibale in the west, Ibanda in the north and Kiruhura district in the east. It has 11 locations and 21 sub locations which come under the central administration in the district headquarters headed by the district commissioner. It is overwhelmingly rural with a population of 92,000 (Population census 2009).

Kamwenge lies within the equatorial zone with an erratic rainfall mean of 350-750mm per year with high evaporation rates aggravated by high mean temperature of 30<sup>0</sup>c. It is unsuitable for rain fed agricultural production. Combined with hot temperatures and extreme evaporation, this makes the district/region best suited for pastoralism based on camel rearing. Livestock keeping and management is the most economic activity in.



### 3.3 Description of the study population

During the study, the major target population was small scale farmer in Kibale County. The area is dominated by Bakiga Banyoro Batooro Batagwenda and Bahima who have a population of 5000 people

The study population was stratified into four non-overlapping categories to enhance diversity of option. These strata was men150 women100 extension workers 50, local leaders 60 considering the agricultural community's population of approximately 360 people, the numbers to be used will depend on the proportions in gender and the participation in agricultural activities.

### 3.4 Sample size and sampling procedures

Slovin's formula

$$n = \left( \frac{N}{1 + NE^2} \right)$$

Where

N-Total population in the study area

E =sampling error (7 to 10%)

$$E = 8/100 = 0.08$$

$$N = 35000$$

$$1 + 35000(0.08)^2$$

$$\frac{35000}{1 + 96} = \frac{35000}{97}$$

$$= 359.6 \text{ Respondents}$$

$$\approx 360 \text{ respondents}$$

The research project applied purposive sampling since case study approach to data collection was used. The research project was carried out in Bwizi, one of the divisions where agriculture is done in Kibale County. The study focuses on men, women, children, extension workers, and local leaders of the community who engages in agricultural activities in Bwizi Sub County. It excludes other community members that are engaging in other forms of land use. A total of 360

respondents constituting men, 25 women 15 local leaders 6 and extension workers 5 was purposively selected from the agricultural community's sparse population of approximately 360 people, a percentage higher than the 40% recommended by Krejcie (1990).

### **3.6 Data Collection instruments**

#### ***3.6.1 Use of questionnaires***

A questionnaire was employed by the researcher during the study. A logically design set of questions was used to answer the research questions in relation to the set study objectives. The questions were both open and close-ended in nature. They will be designed on the following variables; causes of migration, its impacts and suggested measures to improve on land management in Kibale County.

The questionnaire was used in away that the researcher read the questions while filling in the respondents' answer. The method was used partly because some respondents are unable to read or write, or both. Cases of non-response would not arise as the questionnaires are self-administered.

#### ***3.6.2 Interview guide schedules***

The second method that was used to backup the study findings was use of interview guide schedule. It helped in providing a rich detailed about the physical appearance of pastures, water sources, livestock, soil moisture, crops grown, the landscape and among others. All these greatly aid the reader (user) of the report to appreciate what is really on the ground.

#### ***3.6.3 Observations and observation checklists***

Observation was widely used specifically in the viewing on the ground. For example agricultural activities like; how livestock are grazing, the crops grown, the weeds and pasture species, soil moisture indicators, water quality and quantity as well as livestock conditions. The method will help the researcher to discover the relationship of instant migration and land management.

Furthermore, direct observation helps in acquiring sufficient information, which could not have been captured while using other methods like questionnaire due to insufficient knowledge of the respondents on some technical issues.

Documents will review to ascertain information on migration and land management. The

problem being a global one, a world, regional and local perspective view will consider while basing on these documents for well found discussions and conclusions. Libraries and internet searches will be used to obtain this information.

### **3.7 Data analysis**

Qualitative data was collected and analysis by using tabulation. The approach was descriptive and diverse because quantification would not consider essential grasping the basic issues in the research project. The synthesis of the qualitative data complies through the research was used to create a general profile of migration on land management. The data will rearrange into the arrays, placing the evidence in a matrix of categories, creating flowcharts or data display.

The main analytic strategy was based on the original objective and research questions of the study to identify some causal links that could be analyzed. The research project employs an explanatory study.

### **3.8 Ethnical consideration**

The researcher carried out with full knowledge and authority of farmers, assurance of the confidentiality was exhibited in the critical process of collecting and coding data, better still objectivity as principle of research will be paramount to control of bias and distortion, and the researcher will require an introductory letter from the university for introducing him to the field so that he may not be doubted by the respondents.

### **3.9 Limitations of the study**

- i) Language barrier, majority of the respondents are of different tribes and require people to translate the questions for them.
- ii) Limited research work done previously, there are no enough research material available on the topic and the area of the study. The researcher relies on scanty reference found in the development plans and policy papers.
- iii) There are no available register for the number of agricultural practices in the region and therefore the researcher had to employ research assistants to visit the agricultural fields the identify farmers.

## CHAPTER FOUR

### RESULTS AND DISSCUSSION

#### 4.1 Introduction

This chapter presents the research findings of the study about the human migration on land management in Kibale sub county, Kamwenge district western Uganda. It has included personal information about the respondents, causes, impacts and possible management solution towards conservation of lands. The chapter utilized quantitative data presentation and data processing techniques such as frequency tables.

#### 4.2 Background of the respondents

The background characteristics of the respondents wee investigated in order to establish possible basis for the respondents' lodgment of the respective questions. Some of the questions however, served the single purpose of control to reduce complacency in answering the questions.

##### 4.2.1 Sex of the respondents

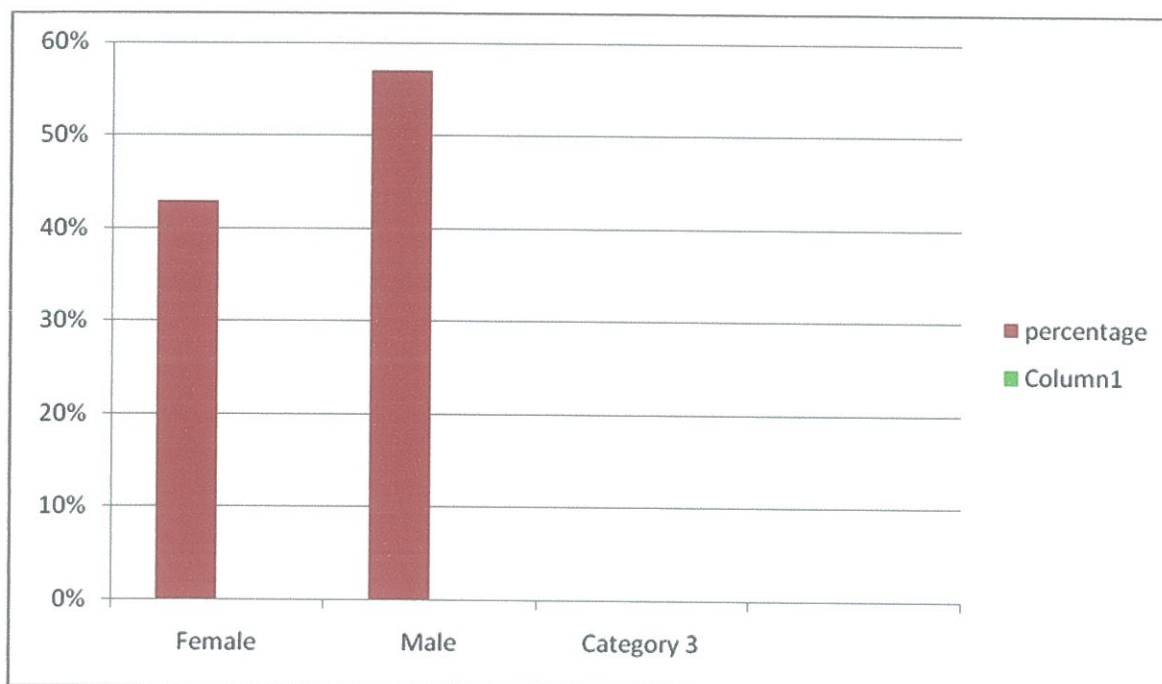
Table 4.1: Showing sex of the respondents.

Sex	Frequency	Percentage
Female	30	43%
Male	40	57%
<b>TOTAL</b>	<b>70</b>	<b>100%</b>

**Source:** field study

This table as shown above showed that 43% respondents were female and 57% were male. This was because males were the most people involved in activities that effect land degradation compared to females to answer the questions. The researcher approached claimed, that men are the ones who lead them so let them answer the questions. Because men clear land for cultivation

**Fig 1 A Graph showing sex of respondents**



There is imbalance among the respondents interviewed because the percentage for male is bigger than female. This was because males are mostly involved in the activities that affecting the wetlands compared to females to answer the questions.

#### **4.1.2 Age of the respondent**

**Table 4.2: Showing age of the respondents.**

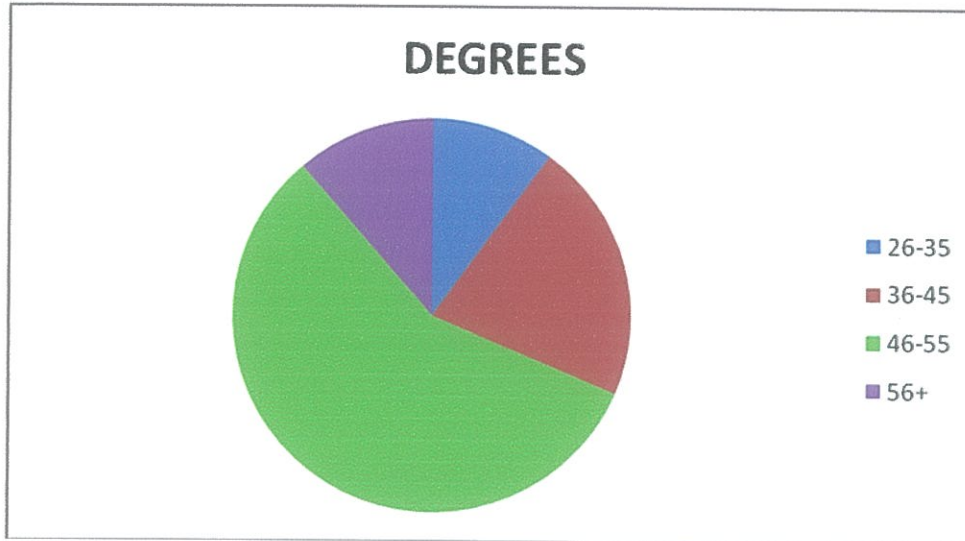
<b>Age group</b>	<b>Frequency</b>	<b>Degrees</b>
26-35	7	36
36-45	15	77
46-55	40	206
56 and above	8	41
<b>TOTAL</b>	<b>70</b>	<b>360</b>

**Source: field study**

The findings showed that the majority of respondents were in the age of 46-55 years of age with just over 50% while those in the age bracket 36-45 years were second with 25% of the respondents. Those that were in the age group 26-35 years were 12% and 50+ were 13%

respectively. This is because mature people aged between 36 and 55 years were responsible for the migration and occupancy of the lands looking for agricultural land in Kibale County.

**Fig 2 Showing age of the respondents.**



Most respondents were aged between 46 and 55 (50%) because mature people aged between 36-55 years were responsible for the distraction and occupancy of lands looking for agricultural land compared to young and old people in Kibale County. These findings agree with those of ministry of agriculture, animal industry and fisheries in its report 2011.

#### 4.2.3 Occupation of respondents

**Table 4.3: showing the occupation of the respondents.**

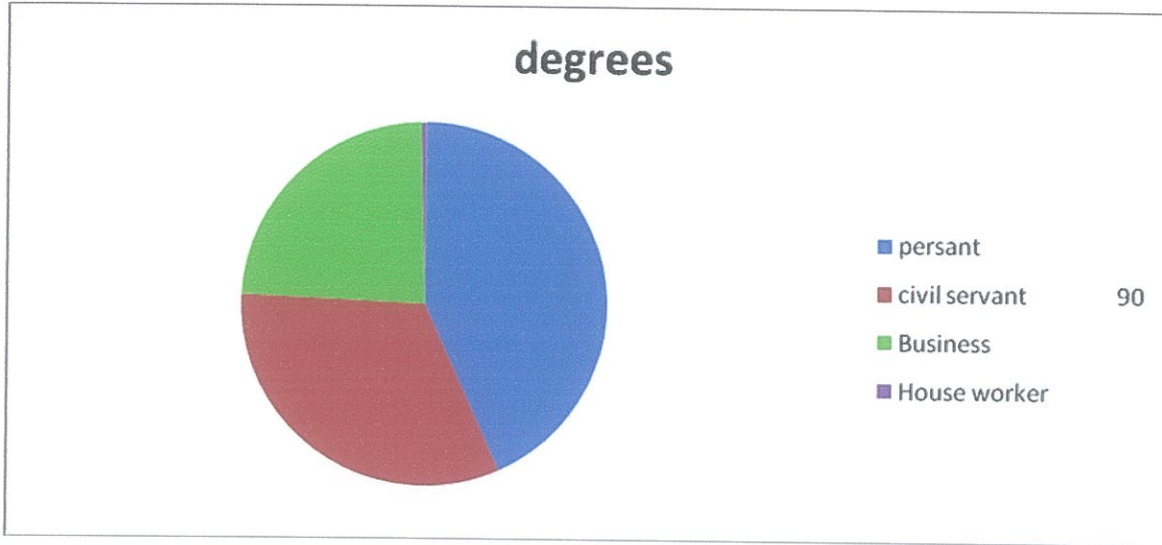
Occupation	Frequency	Degrees
Farmer/peasant	30	120
Civil servants	17	90
Business	11	66
House workers	12	84
<b>TOTAL</b>	<b>70</b>	<b>360</b>

**Source: field study**

Majority of the respondents were peasants followed by civil servants as shown in the table above. Most men and women who were interviewed and have filled the questionnaire were peasants. This was because Kibale county area is occupied by local people who carry out small

scale farming. Few business men use money to invest in farming that is why cultivation and distraction of forest land is common in Kibale County Kamwenge district.

**Fig 3 showing the occupation of the respondents.**



Most respondents were farmers (120 degrees) and civil servants (90degrees) because the migrants' area is surrounded by local people who carry out small scale farming.

#### 4.2.4 Religious status of the respondents

**Table 4.4 showing the religion of the respondents**

Religion	Frequency	Percentages
Catholics	18	26%
Protestants	35	50%
Muslim	12	17%
Others	5	7%
<b>TOTAL</b>	<b>70</b>	<b>100%</b>

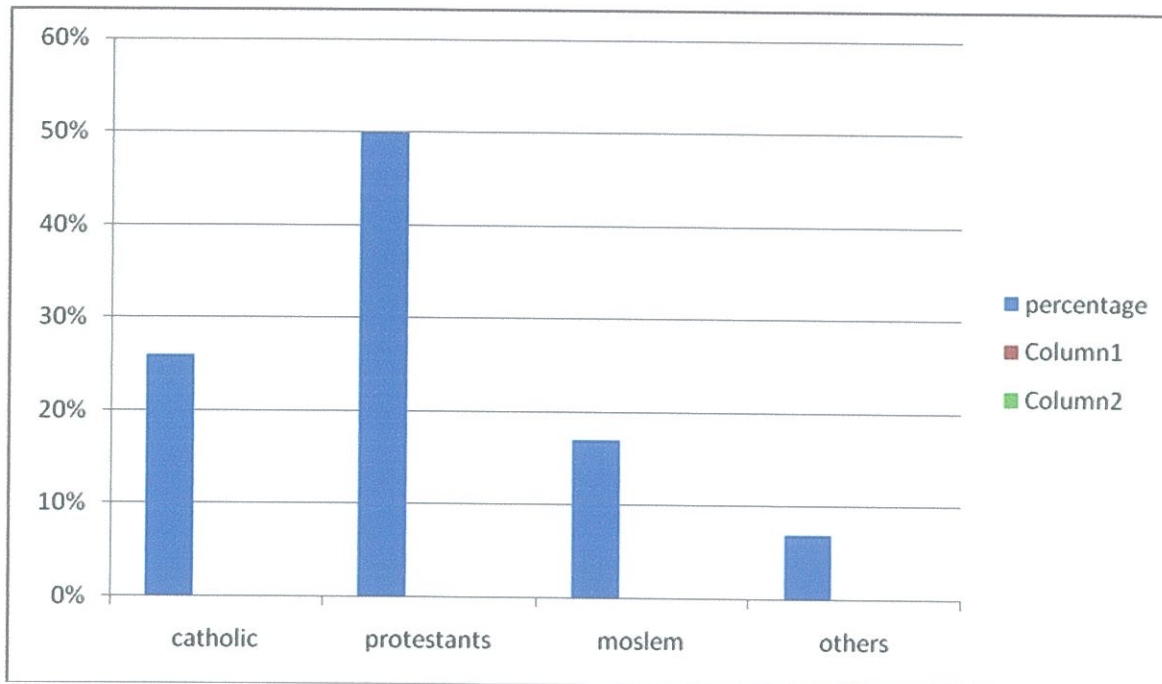
**Source: field study**

Majority of the respondents were peasants because the place is surrounded by protestant churches that are Nkoma church of Uganda and Kyabenda Archdeaconry church of Uganda.



50% were Protestants followed by Catholics 26%, Muslims 17% and others 7% as shown by the table above.

Fig 4 showing the religion of the respondents



Majority of the respondents were Protestants (42%) and Catholics (30%) because the place is surrounded by Protestants churches and Catholics churches.

Not only that, even most of the immigrants came from areas dominated by protestants as asserted by Rev Rwabishari Steven Nkoma Archdeaconry East Rwenzori Diocese newly created from Rwenzori Diocese Kamwenge district.



### 4.3 causes of human migration and occupancy on land

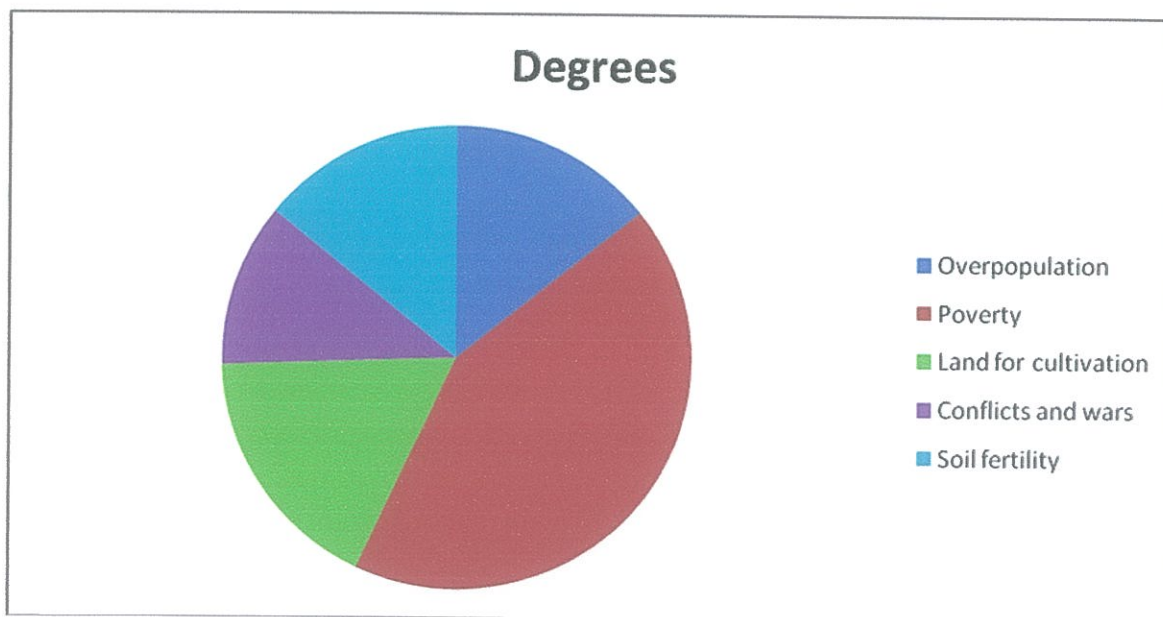
Table 4.5 Showing causes of human migration and occupancy on the land.

Causes	frequency	Degrees
Overpopulation	10	51
Poverty	30	154
Land for cultivation	12	63
Conflicts and wars	8	41
Soil fertility	10	51
<b>TOTAL</b>	<b>70</b>	<b>360</b>

Source: **field study**.

Given the table above, the study has found that the major cause of human migration and occupancy on land were poverty represented by (154degrees), land for cultivation 63, overpopulation 51, soil fertility 51. This is because the place is surrounded by poor people which result all causes as said by LC 2 Chair person Hon muhumuza that “unemployment is a general in our community”.

Fig 5 Showing causes of human migration and occupancy on the land.



Most respondents said that poverty is the major cause of human occupancy and clearance of forestland and wetland (154). These findings agree with these of Kamwenge district social economic survey 2000 which found out that inadequate food security cause people to encroach on forest land ecosystem. This evidenced by UN definition of poverty as “any individual who earns less than a dollar per day” therefore people look at land resource for survival and employment.

#### 4.4 EFFECTS OF HUMAN MIGRATION ON LAND RESOURCE

Table 4.6 showing effects of human migration and occupancy on lands.

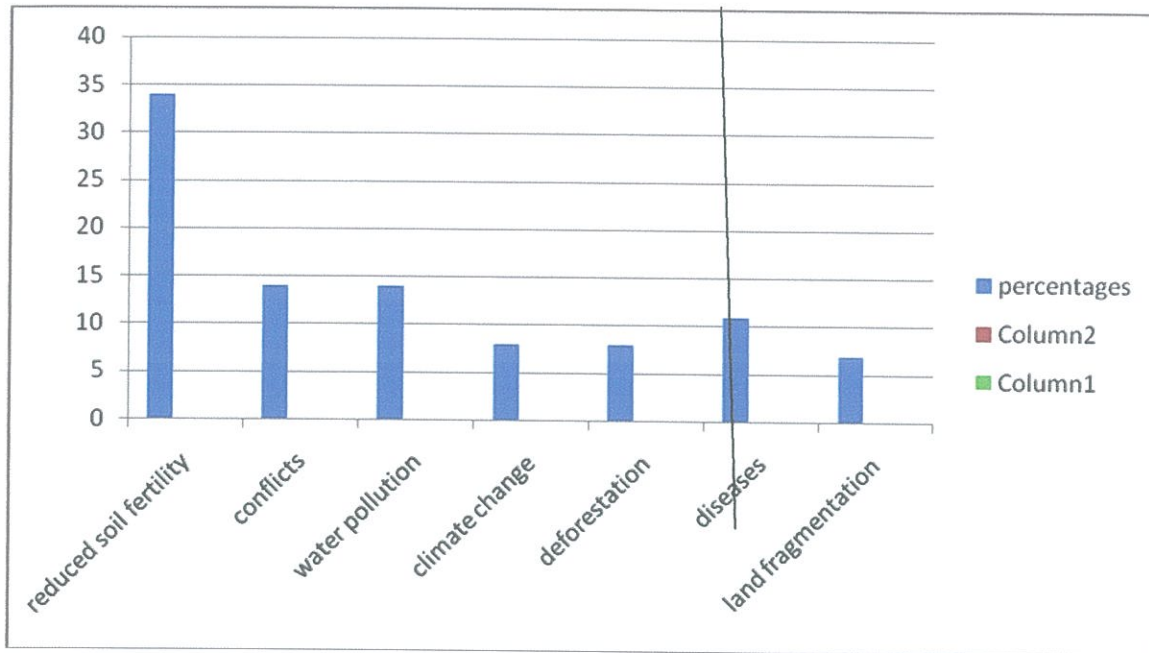
Effects	frequency	percentages
Reduced soil fertility	25	34%
Conflicts	10	14%
Water pollution	10	14%
Climate change	6	8%
Deforestation	6	8%
Disease(malaria)	8	11%
Land fragmentation	5	7%
<b>TOTAL</b>	<b>70</b>	<b>100%</b>

Source: field study

Most respondents said that after reduced water capacity due to drainage channels all the wetlands that is to say 129 degrees this leads to disappearance of wetlands forests especially in dry seasons. It was also found that human migration occupancy on wetlands lead to extinction of terrestrial and aquatic species as shown by 31 and 31 said that it leads to land pollution.

Findings showed that 41 degrees of the respondents said that human occupancy on forestlands leads to diseases such as malaria because wetlands act as hiding and breeding grounds for vectors that transmit diseases, especially mosquitoes and flies. Climate change land fragmentation and loss of lives also were found out as a result of human clearance of wetlands, climate changes 31, fragmentation 26 degrees and loss of lives 51 as shown in the table above.

Fig 6 showing effects of human migration and occupancy on lands.



The study found out that human occupancy encroachment on land reduce soil capacity 34% and water pollution 14% because of the drainage of water channels and swamp reclamation. These findings agree with those of NEMA report (2006) which indicates that bricklaying, commercial settlement and as well as human settlement and agricultural activities which all reduce soil and water capacity for both domestic and animal consumption.

Reduced soil fertility by 34% due to continuous cultivation, over grazing, that enhances soil erosion.

#### 4.5 Economic importance of land

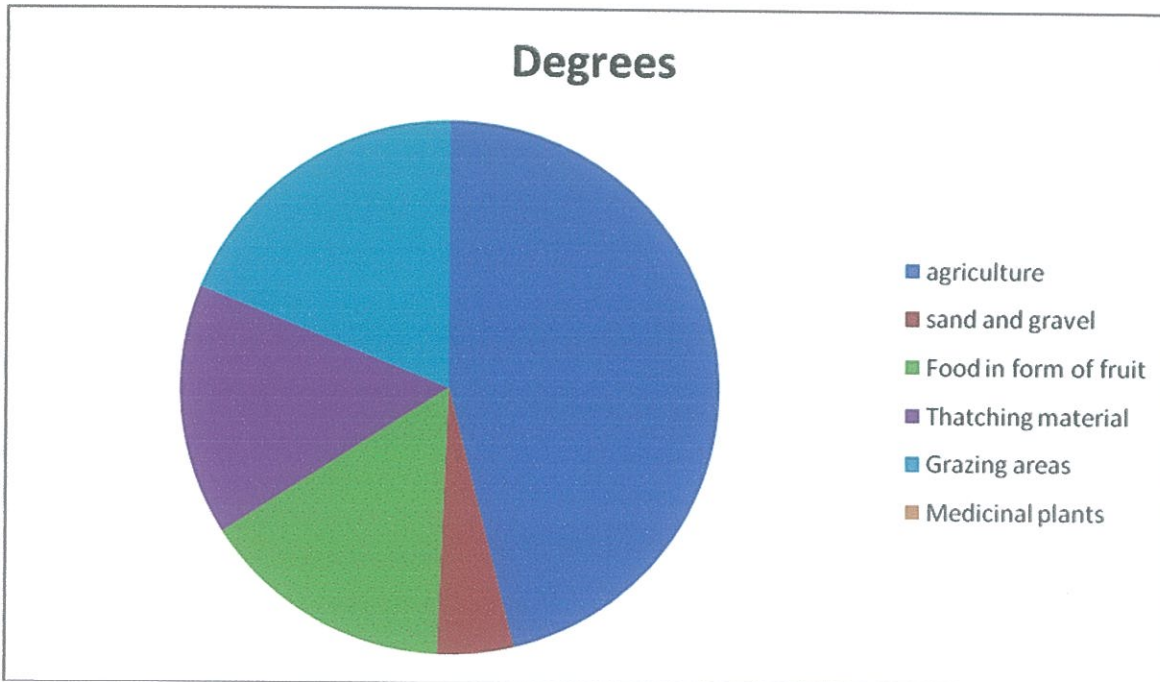
Table 4.7: showing economic importance of land.

Importance	frequency	Degree
Agriculture	30	154
Sand and gravel	3	15
Food in form of fruit	10	51
Thatching material	10	51
Grazing areas	12	63
Medicinal plants	5	26
<b>TOTAL</b>	<b>70</b>	<b>360</b>

Source: field study

The findings showed that majority of respondents said that economic importance of land resources was that it provides soil for agriculture for many people with 154, followed by grazing areas for their animals represented by 63, food in form of fish and wild fruits and thatching material represented by 51 each, followed by medicinal plants 26 and also provide sand and represented by 15.

Fig 7 showing economic importance of land.





From respondents, it was found out that wetlands provide water for many people in the area (33%) and grazing area for their animals (20%). These findings agree with those of Kamwenge district report 2004 which found out that as long as cattle keepers do not destroy wetlands, the district authorities allow them to graze from some parts of the wetlands.

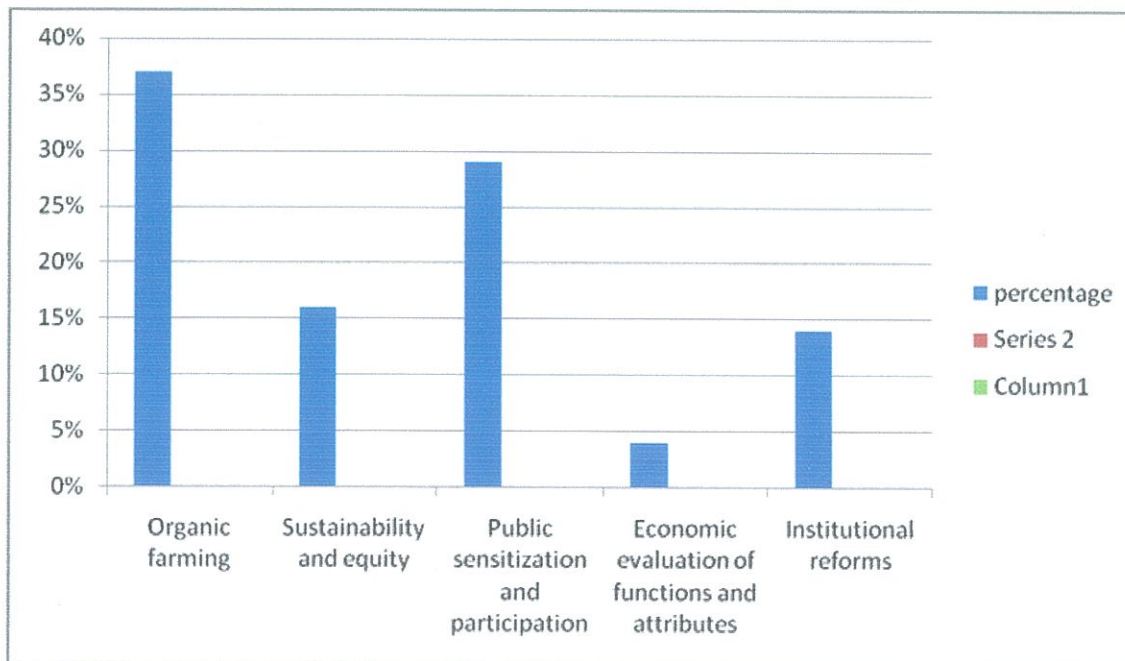
#### 4.6 Management solutions that the government should take to conserve land ecosystems

Table 4.8 showing measures to be taken by the government.

Measures	frequency	Percentage
Organic farming	19	37%
Sustainability and equity	8	16%
Public sensitization and participation	15	29%
Economic evaluation of functions and attributes	2	4%
Institutional reforms	7	14%
<b>TOTAL</b>	<b>51</b>	<b>100%</b>

Source: field study

Fig 8 showing measures to be taken by the government.



The study findings in the table 4.9 shows the management solutions that he government should take to conserve water and soil ecosystems includes organic farming as shown by 37%. This is because policies are relevant in solving environmental problems and should be supported by law. 16% of the respondents said that sustainability and equity would improve on management of water and soil resources, 14% of the respondents said hat institutional reforms for example schools, college and higher institutions by introducing environmental courses would help to conserve soil and water on land hence influencing productivity .

**4.7 Conservation measures to be adopted by the community.**

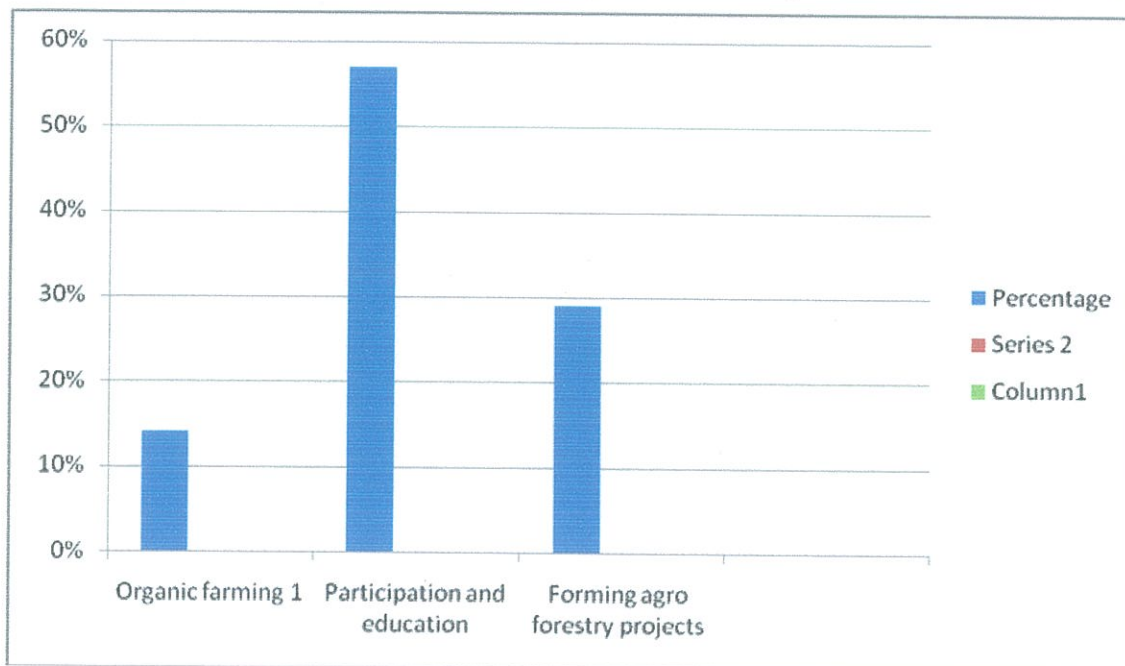
**Table 4.9: showing the measures to be adopted by the community in conservation of land Resource.**

Measures	frequency	Percentage
Organic farming	10	14%
Participation and education	40	57%
Forming agro forestry projects	20	29%
<b>TOTAL</b>	<b>70</b>	<b>100%</b>

**Source: field study**

The study findings show that participation and education should be taken by the community as management solution to conserve and manage land by 57% in the table above. Forming agro forestry projects to enhance soil and water conservation 29% by reporting those who are involved in mismanagement activities said by respondents. Flexibility and feasibility through organic farming can also reduce impact; this is because an activity that does not matter with land management processes should be changed by selecting activities that are focused on feasible and realist objectives. This has 14% as shown in the table above.

**Fig 9 showing the measures to be adopted by the community in conservation of land**



Respondents said participation and education (57%) should be taken by the community as management solution to conserve soil and water in Kibale County, forming groups to protect land and flexibility and feasibility. These findings agree with those of Kamwenge District report, 2004.

## CHAPTER FIVE

### SUMMARY OF FINDINGS CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The research was carried out in Kibale County on the impact of human migration on land ecosystem the following presents the summary of findings conclusions and recommendations.

#### 5.2 summary of the major findings

Human settlement on land ecosystem was found to be in existence in Kibale County represented by the tables before. That is to say 92% of those who experienced and 8% who did not. These percentages have shown clearly that there is human migration and settlement on land.

The kind of activities which were carried out in Kibale was cultivation, swamp reclamation, housing construction, bricklaying, fishing and over grazing. Human activities were found to be hindering functions of land ecosystem in Kibale County in the following ways. Loss of fertility, land fragmentation, Contamination of water sources due to inability of wetland to remove various contaminants which results into the increased cost of water purifications by national water and sewerage cooperation (NWSC) and all forms environmental degradation.

Increased flooding which results in washing away of bridges and roads making transportation difficult. Washing away of houses leaving many people homeless and loss of property during rainy season The disappearance of land species and loss of habitants because some organisms live in specific ecosystem such as aquatic organisms, birds and animals like monkeys. Increased incidences of water born diseases such as cholera, bilharzias, dysentery and typhoid Stagnant water provides breeding rounds for malaria there by increasing incidences of malaria.

The study found out that people migrate and occupy land looking for extension of land for cultivation, fishing, and bricklaying and thatching materials for their houses increase land for animal grazing in Kibale County.



### **5.3 Conclusion**

The cost of land management is high, effects of mismanaging lands results in harm to our health as in climate change and even the loss of life though the effects of water related diseases, poor crop yields and water pollution. Human migration into Kibale County Kamwenge district is real and its causes are just minor things even communities can adjust, it's only lack of adequate information and sensitization on protection and maintenance of lands.

Therefore proper land management is everyone's responsibility because it performs key environmental functions that contribute significantly to the livelihoods of those who depend on it through their provisioning, regulating and aesthetic services. Lands provide goods and services that are vital resources to the health of the people.

### **5.4 RECOMMENDATIONS**

Despite their contributions to people's livelihoods and national economy, land resource is under threat due to demand of land for agriculture industries roads, housing and brick laying increases in both urban and rural areas.

As a researcher and environmental student, I suggest that every one should be responsible for sustainable utilization land resources in a sustainable manner. Stop dumping wastes on land, draining wetlands and offer protection to wetlands of critical importance based on their function because wetlands provides with constant and stable water supply.

The government should publish some information on land management through magazines, newspapers, radios and article about their functions on the environment such that every body should have access to reading and hearing about the effects and see how they can reduce on it, report any wetland abuse to relevant institutions. Funding agro forestry programs.

### **5.5 Issues for further research**

The researcher did not get the total number of people occupying land resources. This means further research is needed in this area about sustainable land management in Kibale County.

The researcher was limited to few farmers within the county because of lack of researches and time available to carry out the research. A more comprehensive research should be carried out covering many farmers in Kamwenge as a whole.

Further research should be carried out on problems associated with land degradation

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## APPENDICES

### APPENDIX 1: QUESTIONNAIRE FOR OFFICIALS AND LOCAL RESIDENTS

KAMPALA INTERNATIONAL UNIVERSITY

DEPARTMENT OF ENVIRONMENT MANAGEMENT

**Topic: Migration and land management in Kibale County, Kamwenge district western  
Uganda**

Dear respondent

I am **TWESIGYE GUIDENCE** carrying out a research study on “Migration and Land Management in Kibale county Kamwenge district”. You have been selected to participate in this study and there fore kindly requested to answer the questions herein by filling in the required data. The information given here will be solely used for academic purposes only and your responses will be treated with the highest degree of confidentiality

Thanks for your valuable time

**SECTION A: RESPONDENTS BACKGROUND**

(Tick in the boxes for each question and fill in the spaces provided)

1. Sex: male  female

2. Age interval: 26-35  36-45  46-55  56+

3. What is your level of education?

Primary  O' level  Vocational  University  N/A

4. What is your occupation?

Peasant  nurse  doctor  teacher  business   
Housewife

5. Marital status:

Married  single  widow  widower

6. How many are you in this home?

Parents  children

**SECTION B: ROOT CAUSES OF MIGRATION IN KIBALE COUNTY**

7. What are the major causes of migration in Kibale County? .....

.....

8. What shows that people are seriously migrating in Kibale? .....

.....

9. Where are they coming from? .....

.....

**SECTION C: EFFECTS OF MIGRATION ON LAND MANAGEMENT**

10. Is there any effect of migration on land resource? .....

11. What kind of crops do you plant? .....

12. Do you use any fertilizer or chemical and herbicides in your farming activity? Yes.....

No.....

If yes how often and in what quantities? .....

13. What are the forms farming being practiced? .....

.....

14. Which group of people is being affected? .....

#### SECTION D: SOLUTIONS TO THE ABOVE CONSEQUENCES

23. What are the ways that can provide immediate solutions to overcome these challenges?

.....

24. Is there any institution that has tried to come up solution, if yes what was the outcome?

.....

25. Apart from the government who else helps you in issues concerning rapid migration and land management? .....

26. In your point of view, what do you think can be done to improve on land and water supply in your community? .....

.....

.....

.....

**Thank you for your information**

APPENDIX 3: OBSERVATION CHECKLIST (ONLY FOR RESEARCHER)

1 How many people that are occupying one acre of land?

.....

2 Are people interested in farming?

.....

3 Are there a forestation projects Kibale County?

.....

4 Number of children every family?

.....

5 Types of families in community?

Nuclear

.....

Extended

.....