

**DESSERTIFICATION AND RURAL DEVELOPMENT IN AKOKORO SUB-COUNTY,
APAC DISTRICT. UGANDA**

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APPROVAL

I certify that this research report was done under my supervision and submitted with my approval for examination.

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DEDICATION

I dedicate this to my mother Christine who dedicated all her recourses to educate and to all my Family Members, friends and relatives.

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I greatly thank the almighty God for the provision, knowledge, support and life giving, from the start till this level He has been guiding and empowering me. Glory be to God

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May God reward you all

ACRONYMS/ ABBREVIATIONS

ADRA	:	Adventist Development and Relief Agency.
CAO	:	Chief Administrative Officer.
CBOs	:	Community Based Organizations.
DDMC	:	District Disaster Management Committee.
DEC	:	District Environment Committee.
DEAP	:	District Environment Action Plan.
DSOER	:	District State of Environment Report.
DTPC	:	District Technical Planning Committee.
EEA	:	Environmental Education and Awareness.
EEC	:	European Economic Community.
EIA	:	Environmental Impact Assessment.
FIRD	:	Foundation for Interventions on Rural Development.
FR	:	Forest Reserves.
GCP	:	Gender Community Participation.
Gov't	:	Government
HIV / AIDS	:	Human Immune Virus/Acquired Immune Deficiency Syndrome.
HSD	:	Health Sector Department
KDC	:	Karamoja Data Centre.
KDDO	:	Karamoja Diocesan Development Office
KDLG	:	Kotido District Local Government.
KPIU	:	Karamoja Planning and Implementation Unit.
KVNP	:	Kidepo Valley National Park.
KWA	:	Kotido Wildlife Authority.
LEC	:	Local Environment Communities.
MOES	:	Ministry of Education and Sports.
MOFPED	:	Ministry of Finance Planning and Economic.
MTN	:	Mobile Tele Communication Network.
NDM	:	Non Degradable Materials.
NEAP	:	National Environment Action Plan.
NEMA	:	National Environment Management Authority.
NEMP	:	National Environment Management Policy.
NFA	:	National Forest Authority
NFCP	:	National Forest Conservation Programme.
NGOs	:	Non Governmental Organization
PHC	:	Primary Health Care
PGR	:	Population Growth Rate
UNCDF	:	United Nations Children Development Fund.
UNICEF	:	United Nations International Children's Emergency Fund.
VGs	:	Vulnerable Groups
WFP	:	World Food Programme

ABSTRACT

The study was carried out on desertification and rural development in Akokoro sub-county where by Akokoro sub-county was used as the case study. The study objectives included to establish the extent of desertification in Akokoro sub-county, to find out the extent of development in Akokoro sub-county, to establish if there is significant relationship between the level of desertification and the level of rural development. These guided the study and determined the data that the researcher collected from the field through interviews and questionnaires. The study used an exploratory research design to explore into issues concerning the practice of desertification and rural development in Akokoro sub-county, simple random sampling was used to select a representative sample from the study population where a sample size of 80 respondents were selected for the study. Data was collected from both primary and secondary sources using documentation, interviews and questionnaires, collected data was analyzed qualitatively using thematic analysis to generate relate data into tables that helped the researcher in discussing the findings. The study indicated that desertification was leading to reduction of rural development in that most of the people were not in position to engage in their usual agricultural activities like farming and livestock rearing because the rain was inadequate for crops, pasture and water for their animals and all this has made people move to nearby settlements like Ayei, Wansolo and Kungu because this areas were still not yet affected by human destruction like cutting down of trees for firewood and overgrazing. This is because these areas were before taken to be insecure places. Therefore, for rural and economic development to be realized in Akokoro sub-county at large the fight against desertification should be encouraged and enforced by various stakeholders like community members, sub-county administrators, sub-county political wing, development partners and the district administration.

CHAPTER ONE

1.1 Introduction

This chapter covered the background to the study, identifies the problems for which the study is carried out, objectives, the research questions, null hypothesis, significance of the study, the conceptual framework and the operation definitions of key terms.

1.2 Background of the study

Desertification is defined as "land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities." As Evers (1994) points out, the current debate on desertification has tended to focus on alarming data and trends in climatology and ecological change, to the neglect of the influence of, and impact on, social conditions.

Internationally, two main global data sets have been used to provide indicators of desertification worldwide. The first is the Global Assessment of Soil Degradation (GLASOD) model. These data estimate the incidence and severity of soil degradation by continent, on the basis of their interpretation by scientists and technicians. The second data set for measuring desertification in dry land areas combines GLASOD data with information from the International Centre for Arid and Semi-Arid Land Studies (ICASALS). This framework covers soil and vegetation degradation as well as changes in the composition and level of vegetative cover. The two data sets above obviously give very different pictures of the extent of world desertification. Moreover, the accuracy, meaning, and practical usefulness of these estimates of global desertification trends are increasingly questioned, particularly given the difficulty of determining the causal relationships of such complex processes (Toulmin 1993).

In response to the unsatisfactory measures involved in macro-level surveys, there is a strong move towards studies of desertification as environmental change, focused on experience at the local level (Toulmin 1993). Such studies have tended to demonstrate the resilience of physical conditions and associated pastoral and farming systems in the face of substantial climatic variability. As well, from this point of view, desertification and environmental degradation are

seen both as causes and consequences of unequal development and poverty arising out of the integration of smaller social systems into a worldwide economic system controlled by the Poverty is a complex and difficult concept to explain. However for the purpose of this document we shall take poverty to mean living without the minimum basic necessities such as shelter, food, health, clothing, with attributes of powerlessness, low education, isolation, low-income and lack of information. It can therefore be defined relative to set benchmark indicators.

Regionally, Uganda was under colonial rule from 1890 to 1962. However, colonial industrial policy assumed significance only in the post-Second World War period. The pro-industrialization stance of the colonial administration is associated with the serious economic hardships Britain was experiencing after the disastrous war. As the Colonial Secretary noted, 'In the six years of the war, the UK [had] changed from one of the major creditor countries of the world to the world's principal debtor nation'. The British Empire was in an economic coma. The problem was that the UK gold and dollar reserves were being used up with no replenishment. The solution was to be found in a two pronged strategy designed to (a) increase exports of primary commodities, particularly to hard currency areas, and (b) increase production in dollar-earning and dollar-saving industries.

It is in the strategy of the push for 'dollar-earning' and 'dollar-saving' industries that Uganda found an opportunity for industrial development. To finance this initiative the Colonial Development and Welfare Act of 1940 was amended by Britain in 1945 and £120 million were reserved for the 'development of the resources of the colonies'. Two categories of industries emerged the processing industries, and manufacturing enterprises. The former were numerous, rural-based, and dispersed; the latter were fewer and concentrated in urban areas. One category prepared cotton and coffee for export (through cotton ginneries and coffee hulleries), the other primarily targeted the domestic market through import substitution.

Locally, Deforestation and tree cutting, burning grass during the dry season, overgrazing, drought, floods, famine, livestock and human diseases and poorly managed agriculture. Several communities in Apac, Kokoro reported high rates of deforestation. Apart from the known environmental impacts of deforestation this problem has affected women in Lango in a special manner. The women reported that they now travel long distances and spend more time searching

for firewood, a clear sign / indication that deforestation has been extensive. (District Disaster management committee report 2012)

1.3 Statement of the Problem

Agriculture is the most climate sensitive economic sector and the rural poor in APCA will be most impacted by the adverse effects of climate change (George .M., 2015). Climate change mitigation and adaptation policies require interventions at many different scales, ranging from crop and on-farm management to the community, national, regional, and global levels (Nazneen Kanji, 2009).

At the national and international levels, trade regimes, climate policy, and agricultural development policies have powerful impacts on poverty, livelihoods, greenhouse gas emissions, and overall food, human, and environmental security (FAO, 2006). Improved understanding of these impacts, and the implementation of appropriate policies based on this understanding, would generate improved outcomes that would have major impacts on human welfare and environmental sustainability.

Youth development for citizenship, employment and leadership is a crucial topic for addressing and overcoming the challenges posed to agriculture education and training (AET). Today's group of young people is the largest in history and much of these youth have abandoned agriculture as a way of life (World Bank, 2008). The growing food crisis, climate change and increasing global unemployment and underemployment rates disproportionately affect the world's youth population (Bennell, 2010; FAO, 2009). They are the next generation of farmers, yet most have limited opportunities or declining interests in continuing in agriculture (World Bank, 2008). Youth represent a massive untapped potential to improve the rural agricultural system of developing countries, if appropriately equipped with the necessary skills, training and education to enter society as competent, empowered and capable citizens.

Agriculture's important role is one of production, both of food for the rural and the urban population and of cash crops for the export market, to earn foreign currency. In this process demand is stimulated for other products and services, and employment opportunities emerge to

absorb the society's work-force. However this has been left out in Akokoro sub-county and this why there is need for this study.

1.4 General Objective

To examine the role of desertification in enhancing rural development in Akokoro sub-county in Akokoro sub-county.

1.5.1 Specific Objectives on the Study

- i. To establish the extent of desertification in Akokoro sub-county
- ii. To find out the extent of development in Akokoro sub-county
- iii. To establish if there is significant relationship between the level of desertification and the level of development

1.6 Research Questions

- i. What is the extent of desertification in Akokoro sub-county?
- ii. What is the extent of development in Akokoro sub-county?
- iii. Is there any significant relationship between the extent of desertification and the extent of development?

1.7 Scope of the Study

1.8.1 Geographical scope

The study was conducted from Akokoro sub-county which is located approximately 250 km north of Kampala in Northern Uganda. It lies between longitudes 32° E and 34° E and latitudes 2° N and 3° N and is therefore very equatorial in climate and environment. The topography of Apac is characterized by low plains and rolling hills along the river Nile at 900 m above sea level, rising to a series of hills and peaks in the eastern and north eastern parts of the district. Apac lies at an average altitude of 1,150 m above sea level.

The vegetation of Apac is predominantly of the dry savannah type. The district covers 3,908km² of which swamps and water constitute 29 per cent. The wetlands comprise both permanent and

seasonal wetlands (294 km² and 853 km² respectively) mainly of the type papyrus swamp, which have been found to have high biological diversity. Forest covers 15 per cent of the district. Isolated riverine forest type vegetation is found along the Nile which runs along the southern border of the district in Lake Kyoga and Lake Kwanja. The soil of Apac is a reddish-brown layer of clay loam which covers almost all cultivable land (90 per cent) and is very suitable for rain-fed agriculture.

1.8.1 Content scope

The study was basically focusing on desertification and rural development among the inhabitants as a case study, and was conducted in Akokoro sub-county in particularly Akokoro sub-county.

1.8.3 Time scope

The study used the data on effects of desertification on rural development between the years 2008-2014 to bring out the information on the trend of desertification and rural development.

1.9 Significance of the Study

The study results shall be used by policy makers to evaluate the impacts of desertification in ensuring sustainable socio-economic development of Akokoro sub-county and Apac district and Uganda at large. This is because the results will reflect the impacts and challenges of desertification and how it can solve or made adjustments for efficiency and effectiveness

The study findings shall provide the public with the various skills and roles that various stakeholders can play in fighting desertification and ensuring development and the responsibilities they carry. This will promote an active participation of the community in managing their resources for development.

The study results shall be used by future scholars as a source of secondary data and a source of references to the people who may want to study the problem at length. This provides them with baseline information upon which they can base their argument to site areas of agreement and disagreement in the results.

1.9 Operational definition of key terms

Climate change: Refers to statistically significant change in measurements of either the mean State or variability of the climate for that place or region.

Coping capacity: The means by which people or organizations use available resources and abilities to face adverse consequences that could lead to disaster.

Disaster : A serious disruption of the functioning of a community or a society causing widespread human, material , economic or environment losses which exceed the ability of the affected community or society to cope using its own resources.

Disaster risk Management: The systematic process that integrates risk identification, mitigation and transfer, as well as disaster preparedness, emergency response and rehabilitation or reconstruction to lessen the impacts of hazards.

Early warning: The provision of timely and effective information through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

Environment degradation: The reduction of the capacity of the environment to meet social and ecological objectives, and needs.

Hazard: A potentially damaging physical event, phenomenon, or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Sustainable development: Development that meets the needs of the present without comprising the ability of future generations to meet their own needs.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter captured the following vital areas relating to literature review how desertification and development correlate; it also covers environmental degradation and disaster risk, effects of desertification on development and solutions to such effects.

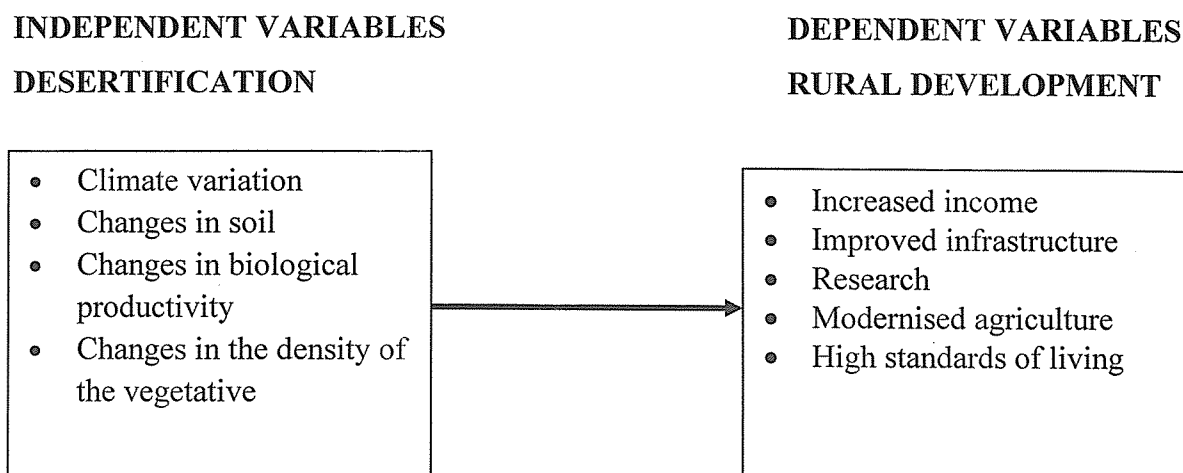
2.1 Theoretical review

The International Convention to Combat Desertification in Countries Experiencing Drought and Desertification, Particularly in Africa was signed by Uganda in 1994. A country case study was prepared as input to the inter-governmental negotiation committee of the convention to combat desertification. The Ministry of Natural Resources, the Ministry of Agriculture, Animal Industry and Fisheries and the Ministry of Local Government are responsible for addressing desertification issues. Legislation was revised in 1995. NGOs, women organizations and youth groups participate in combating desertification at the field level. At the national level, they have advisory status.(Report from MAAIF and MoLG 1995)

There are three sub-county's affected by desertification in the Apac district in particular; Akokoro sub-county, Apac sub-county and Panyangara sub-county. And also some other parts of the country like the Buruli-Luwero District and the Rakia District. Details have to be surveyed and more research is needed. A National Action Plan to Combat Drought and Desertification has been prepared, but external funding is needed for its implementation.

2.2 Conceptual framework

Figure 1: Showing Conceptual Framework Showing Desertification and Rural Development



Source: Modified from Edkins, Jenny (2000)

From the above figure, desertification (Independent variable) is one aspect that bring about the impact on the rural development (Dependent variable) in the region of Apac that the conceptual shows that climate variation, changes in soil, changes in biological production and change in the density of the vegetative prompts to increase income, improved infrastructure, modern agriculture and others which is a tremendous change in the district.

2.3 Review of related literature

2.3.1 Desertification

Desertification is acknowledged to be a complex phenomenon requiring the expertise of researchers in such disciplines as climatology, soil science, meteorology, hydrology, range science, agronomy, veterinary medicine, as well as geography, political science, economics and anthropology. It has been defined in many different ways by researchers in these and other disciplines, as well as from many national and bureaucratic (institutional) perspectives, each emphasizing different aspects of the phenomenon.

Desertification is of particular interest to climatologists in their attempts to understand climate variation and change on both short and long time scales (Hare, 1976). With increasing pressure on governmental decision-makers to allow populations to move into the climatically marginal areas, the implications of natural variations in climate have become even more important in decisions relating to the use by society of its land in these desertification-prone regions. One can easily assert that there will always be climatic deserts. However, man-induced extensions of these deserts or the creation of desert-like conditions in areas where they had not existed can and must be avoided. The climatological communities at both the national and international levels (through, for example, the World Meteorological Organization's Climate Programme and UNEP's World Climate Impacts Programme) have, in general, made the identification of the climatological and meteorological aspects of desertification one of their most important priorities.

A review of the desertification literature shows a great diversity (and confusion) among definitions (e.g. Carder, 1981). This mix of definitions (meanings attributed to the concept) leads to miscommunication among researchers, among policy-makers, and most important, between researchers and policy-makers (see IGU, 1975, *passim*). An analysis of the definitions of desertification could prove useful in developing an improved understanding of the phenomenon, of how it is viewed from different disciplines and countries (and bureaucratic units), and of whether progress in combating it has in fact been as slow as many observers suggest (e.g. UN General Assembly, 1981).

Different definitions focus on changes in soil (e.g. salinization), or vegetation (e.g. reduced density of biomass), or water (e.g. waterlogging), or air (e.g. increased albedo). Most of them, regardless of primary emphasis, also describe changes in biological productivity, with comments related to the type, density, and value of vegetation.

Type-of-vegetation comments centre on changes from desired (or accepted) species to less desired (or less accepted) ones. Such comments cover a reduction in the proportion of preferred

species having an economic or societal value, the lowering of yields of an existing preferred species, or a major ecological change such as species replacement.

Changes in the density of the vegetative cover constitute an important factor acknowledged by many authors in their definitions of desertification. As density decreases, for example, the risks of wind erosion, water erosion and the adverse effect of increased solar radiation on bare soils are increased dramatically. Surface albedo (reflectivity), also enhanced by a reduction in the vegetative cover, is a major contributor to desertification processes.

With respect to the value of vegetation, a few researchers have explicitly referred to "lower useful productivity" (Johnson, 1977), "reduced productivity of desirable plants" (Dregne, 1976), "sustained decline in the yield of useful crops" (UN Secretariat, 1977), and "loss of primary species" (Rapp et al., 1976). However, the concern with the value of vegetation in desertification processes is not shared by all. Some researchers have dismissed the value concern, by suggesting that any type of vegetation that holds the soil in place is of value in the fight against desertification, whether or not it has an economic value.

As a final comment on what desertification is, it is important to note that disciplinary and institutional biases may appear in any given definition of the phenomenon. For example, a meteorological bias might require for the use of the term "desertification" that a change take place in the meteorological parameters of a given region, so that they become similar to those for a desert region (e.g. high evaporation rates, aridity, increased rainfall intensity, and so on). As another example, Meckelein (1976; cited in Kharin and Petrov, 1977) alluded to the disciplinary bases for desertification when he wrote that desertification could be characterized by the following components: climate: increasing aridity (diminishing water supply); hydrological processes: runoff becoming more irregular; morphodynamic processes: intensification of distinct geomorphological processes (accelerated soil erosion by wind and water); soil dynamics: desiccation of soils and accumulation of salt; vegetation dynamics: decline of vegetation.

2.3.1.1 Environmental Degradation and Disaster Risk

Environmental disasters in many cases are affected by human usage of natural resources. They take place especially because of the negative impact of the over-exploitation of natural resources. The combination of growing environmental problems in Apac that include but not limited to: climate change and variability; deforestation, soil erosion and desertification along with growing social problems that include but not limited to : increasing poverty, settlements, protected kraals combine to produce a much higher magnitude of catastrophe than seen before. Households that are poor or those that live in marginal lands already are in a precarious position. For them, weathering events such as drought puts them in distress for survival through seasonal fluctuations in agriculture until the next harvest, and can cut into their production capacity. (<http://www.fao.org/desert/006>)

2.3.1.2 The link between disaster risk reduction, development and the environment

Disasters are not random and do not occur by accident. They are the convergence of hazards and vulnerable conditions. Disasters not only reveal underlying social, economic, political and environmental problems, but unfortunately contribute to worsening them. Such events pose serious challenges to development, as they erode hard-earned gains in terms of political, social and educational progress, as well as infrastructure and technological development.

Several studies have recently highlighted the fact that investments in development are in jeopardy unless precautionary action is taken toward reducing disaster risk. Yet few development organizations adopt a precautionary approach in the design and management of projects and fewer still recognize the role of environmental management in reducing disaster risk.

Environmental degradation, settlement patterns, livelihood choices and behaviour can all contribute to disaster risk, which in turn adversely affects human development and contributes to further environmental degradation. The poorest are the most vulnerable to disasters because they are often pushed to settle on the most marginal lands and have least access to prevention, preparedness and early warning. In addition, the poorest are the least resilient in recovering from disasters because they lack support networks, insurance and alternative livelihood options.

A comprehensive approach to disaster risk reduction (DRR) acknowledges the role of the environment in triggering disasters and protecting communities. At the same time, it recognizes that the environment is itself vulnerable to disasters in post-disaster recovery. The potential contributions of environmental management (including environmental science, information, governance and technologies) towards reducing disaster risk are very vital. Sustainable and integrated management of natural resources, including reforestation schemes, proper land use and good management of rivers will increase the resilience of communities to disasters by reversing current trends of environmental degradation. (<http://www.acted.org.report>)

Deforestation and tree cutting were the most frequently mentioned biophysical change that communities observed in the past 30 years. Several communities in, Apac , reported high rates of deforestation. Apart from the known environmental impacts of deforestation this problem has affected women in Apac in a special manner. The women reported that they now travel long distances and spend more time searching for firewood; a clear sign / indication that deforestation has been extensive.

In Apac , Akokoro sub-county in particular and neighbouring communities have reported that increased cattle rustling and insecurity have led many households to shift from livestock to crop production. Communities in the sub-county have also reported new livelihood options like charcoal burning for men, and firewood trading and beer brewing for women. It was also reported that women are increasingly becoming “bread earners” for the family and this is a major change in the socio-economic set up in Apac . Women also fetch water in towns to earn a living and this increase their leverage as “bread earners” for the family. The communities also reported the cutting of grass and selling the grass for roofing houses.

It was also reported that because of insecurity animals tend to overgraze the “safe areas” hence accelerating environmental degradation. The problem of overgrazing was also reported in areas adjacent to “Protected Kraals.” Additionally the wet season / normal grazing areas around the manyattas tend to be well controlled / managed by elders unlike the dry season grazing areas that are more communal and lack control. The dry season grazing areas are consequently highly degraded because of extensive uncontrolled grazing.

The phenomenon known as desertification has received widespread attention recently, as witness the creation of the United Nations Conference on Desertification in Nairobi in 1977, mainly as a result of the impact of extended drought in the West African Sahel in the early 1970s. That drought caused loss of human lives and livestock and widespread environmental deterioration. Although a number of recent articles, papers and reports from many countries begin with comments on the role of the Sahelian drought in the growing interest in the desertification issue (e.g. Glantz, 1977; UN Secretariat, 1977; Quintanilla, 1981; Zonn, 1981), that drought was neither the first manifestation of the desertification phenomenon nor the only reason for scientific interest in it. In fact, A. Aubreville, a French scientist, popularized the term desertification in his report as long ago as 1949 (Aubreville, 1949), and others (e.g. Le Houerou, 1962) have discussed the phenomenon since the late 1950s.

2.3.1.3 Effects of Desertification

There are various effects of desertification that are as result of Climate Change and Climate Variability, environmental degradation and other socio-economic constraints in the region which include; drought, floods, famine, livestock and human diseases, ambushes, cattle raids, insecurity, fires during the dry season .

The staffing situation is rated "below par" at the central planning level and poor at the middle and field levels. There is a general shortage of trained staff and in particular a lack of management and planning skills and lack of early warning staff. Even trained staff performance is less due to inadequate funding.

An estimated US\$ 20 million of local funding and US\$ 70 million of external funding are needed until the year 2015 to implement the National Plan of Action to Combat Drought and Desertification.

Technologically, in 1994, 42 meteorological and hydrological monitoring stations were in use. This coverage is rated adequate and has improved since 1996. Soil and land monitoring is rated poor, as there are only two monitoring stations working. The Makerere University and the Kawanda Research Station make soil analysis and samples, but there is no feedback and advice

to land users yet. Grazing and improper farming are the most serious desertification factors; effects from fuel wood collection, improper land use and natural causes are rated moderate.

2.3.1.4 Drought and Desertification

Drought is one of the causes of conflict. Many areas affected by drought are arid and semi-arid areas. Under normal circumstances, these areas are low in resources and under substantial ecological pressure. When drought occurs in such arid areas, the living conditions of local people become very difficult. In these conditions, the land yields no crops and water is insufficient for human consumption as well. People compete for the meagre available resources. Pastoral communities are an example of this. Pastoralists depend on their livestock (camels, cattle, sheep, and goats) and move from place to place with their livestock to look for usable pasture land and water. During drought, their movement increases. Sometimes, different pastoral groups move to the same place and want to use the same scarce resources, which cause conflicts between the two communities. (Oxfam review meeting report 2011)

There is a history of pastoral communities fighting for scarce resources in Southern parts of Ethiopia, Northern Kenya, parts of Somalia and the Sudan. Most of the conflicts in those areas were manageable, and tend to be resolved by elderly leaders through traditional conflict resolution mechanisms on an ad hoc basis. However, these conflicts are exacerbated and more difficult to resolve when drought occurs. (Remana research consultant Oxfam 2009)

The present conflict in Turkana in Northern Kenya is a case in point. The region is badly affected by drought. According to a recent World Food Program report, 3.5 million people are currently affected (WFP). People there are fighting for scarce resources. Oxfam, which has a food program in the region, told the BBC that the drought had worsened the conflict there. People are dying from starvation, and they are also dying from conflict, as they fight for water and food. Families are losing their livestock, which is their main source of livelihood. Subsequently, drought-affected people migrate into other parts of the country. This spreads the pressure on resources and results in conflict spreading into other areas as well. In addition, nomadic groups take their cattle to farmlands in search of pasture. Often there is a conflict between farmers and cattle

herders, a situation that is still happening in Northern Kenya and Southern Ethiopia.([http://www.wfp.int/open document](http://www.wfp.int/open_document))

Similarly, when the State of Somalia collapsed in early 1990s, the country was also suffering from drought and human caused famine. Rival pastoral clans who had been deprived of development investment invaded the fertile Juba River farming area.[6] Many farmers were caught unprepared and they bore the brunt of the fighting.

The availability of small-arm and light weapons along border areas where pastoral communities reside also contributes greatly to conflict. Arms ownership is regarded as necessary for the protection of one's community and livelihood in such areas, as they are situated in remote regions, far from the protection of regular state security. But the prevalence of arms also means the prevalence of armed conflict.

The response of the central government to the drought-affected region determines, to some extent, when and where conflict breaks out. Delays of aid often create a feeling of alienation and marginalization among the affected groups. These communities may form different factions and rebel groups to address their frustration with the central government. In such contexts, conflict erupts among the rebel groups and between the rebels and the government in power.

For example, drought-caused famine was part of the cause of the Sudanese conflict. The Khartoum government was silent when the southern part of Sudan was hit by drought and famine. This angered the Southern people and strengthened their opposition to the Khartoum government similarly, the Ethiopian revolution of 1974 and the replacement of authoritarian rule was exacerbated by the monarchy's clumsy handling of famine in the northern part of that country. Likewise, while 8 million Ethiopian people were at risk of drought in 2000, Ethiopia and Eritrea were waging war. According to one BBC report, "War and drought are the two words forever associated with the Horn of Africa. This suggests that drought and conflict always reinforce each other or are two sides of a coin.(BBC report on drought 1996)

2.3.1.5 Previous attempts to overcome the problems of desertification

Reducing Risk

Disaster risk Management is defined as the systematic process of using administrative decisions organization, operational skills and capabilities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or limit (mitigation and preparedness) the adverse effects of hazards. In many countries and in many communities, particularly in disaster prone areas, prevention has, for generations, been one of the coping strategies for living with risk. Traditional coping strategies are important assets to disaster management programs (disaster report by ACTED 2012)

Disaster reduction strategies

Disaster Risk Reduction (DRR) or the conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development is very vital in any disaster prone community.

Disaster reduction strategies are aimed at enabling societies at risk to become engaged in the conscious management of risk and the reduction of vulnerability. The adoption of appropriate development policies can reduce disaster risk. These policies should be gender sensitive and need the necessary political commitment. They involve the adoption of suitable regulatory and other legal measures, institutional reform, improved analytical and methodological capabilities, financial planning, education and awareness. Risk reduction should be seen as a comprehensive process that goes beyond traditional response to the impact of individual national hazards. This process should be multi-sector and inter-disciplinary in nature and comprise a wide range of interrelated activities at the local, national, regional and international levels.(Kobe-hyogo, Japan, 18-22 January 2005)

Contemporary environmental management is often characterized by a diverse array of managing partners including communities, national, and local government agencies, scientists and researchers, NGO's and the international donor community thus providing for vertical integration. Similarly, horizontal integration of management regimes incorporates the interests and dynamics of multiple sectors such as agriculture, environment, disaster management, tourism and health. Integrated approaches have become widely accepted through the development of new planning paradigms, such as watershed management and integrated water resources management (IWRM).

The Action Plan calls, inter alia, for education measures and raising awareness on desertification issues. Farmers and herdsmen are encouraged to diversify economic activities and find alternative livelihoods. Herdsmen are encouraged to settle in one place, and dams are being constructed. Tree planting is generally encouraged. Health services are being improved. Quick maturing crop varieties are being developed and introduced in dry land areas to improve food availability

Around the world, a growing share of the devastation triggered by „natural“ disasters stems from ecologically destructive practices and from putting ourselves in harm's way. Many ecosystems have been frayed to the point where they are no longer resilient and able to withstand natural disturbances, setting the stage for „unnatural disasters“ – those made more frequent or more severe due to human actions. By degrading forests and rangelands, filling in wetlands, and destabilizing the climate, we are unravelling the strands of a complex ecological safety net. (Abramowitz, 2001)

Partnerships-formation of partnerships is top priority in DRR and environmental management. The different key players / Stakeholders have different roles to play in DRR and these roles form / intertwine into a web that determines the success or failure of the interventions. The partnerships currently initiated under the EWS and CMDRR should be strengthened / a good starting point!

Engage environmental managers fully in national disaster risk management mechanism especially desertification: National platforms for disaster risk reduction should integrate

environmental concerns and should be supported by environment-related institutions. Likewise, disaster managers are important partners in environment management initiatives. This arrangement should be institutionalized up to local government and the grass roots / community level.

Include risk reduction criteria in environmental regulatory frameworks: Frameworks such as Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments, which have been successfully used to prevent further environmental degradation, should be adapted to address disaster risk as well. NEMA should be a key partner in DRR and environmental management.

Integrated environmental and disaster risk considerations in spatial planning and land management: Environmental authorities, who provide fundamental information and analyses during multi-sectoral zoning and land-use planning, should advocate for greater attention to disaster risk reduction during these processes. There is an urgent need to support a sustainable settlement development and a sustainable land use on consideration of the different public and private interests because of their important influences on environmental disasters (Moroto NGO forum dissemination seminar 2012)

Strengthen community based strategies that involve women in planning and decision making: These strategies have been found to be effective and lessons need to be better documented, and compiled in such a way as to provide guidance for program planners. Related to this, is the issue of improving land ownership by women, and its relevance for reducing disaster vulnerability, and improving ability to recover from desertification. The community based initiatives should strengthen / be based on the model that is currently spearheaded by KARITAS Apac in the CMDRR consortia.

Improving local communities' rights to natural resources is a movement that is steadily gaining ground-and should continue to do so in order to meet the environmental and social justice goals of sustainable development.

Cooperation

Several international organizations support the country's efforts to combat desertification,

including CARE, the United States Agency for International Development (USAID), the European Union, the World Bank, International Fund for Agricultural Development (IFAD) and Intergovernmental Authority for Drought and Development (IGADD). They have participated in reviewing national strategies and they have provided additional post-UNCED funding and human resources. Coordination of and cooperation between programmes could be improved.

There are good initiatives that are already in practice / on – going in the Lango region. SSD/KARITAS Apac leads a consortium composed of KADP, MADEFO, KARITAS Lango and KARITAS Apac in DRR initiatives. The communities carry out Risk Assessments and several other mitigation measures that are implemented by the communities based on Community Disaster Risk Reduction (CDRR) groups.

The Agency for Technical Cooperation and Development (ACTED) Lango is spearheading a Drought Early Warning System (DEWS) in the Lango Region. After ACTED and partners have collected the information and written the relevant reports they discuss the issues with the relevant sector e.g. Food Sector Working Groups (FSWGs) and thereafter a partner e.g. an NGO working on food security addresses the issue / problem. The reports are shared with different partners who eventually carry out the interventions.

2.4 Rural development

2.4.1 Concept of rural development

Rural community development is a process conducted by community members. It is a process where local people can not only create more jobs, income and infrastructure, but also help their community become fundamentally better able to manage change (Biggs, S. 1999).

Development is a process that increases choices. It means new options, diversification, thinking about apparent issues differently and anticipating change (Christenson et.al., 1989). Development involves change, improvement and vitality a directed attempt to improve participation, flexibility, equity, attitudes, the function of institutions and the quality of life. It is the creation of wealth meaning the things people value, not just dollars (Shaffer, 1989). It

leads to a net addition to community assets, avoiding the “zero sum” situation where a job created “here”, is a job lost “there” (Shaffer, 1989).

The “concrete” benefits of community development, such as employment and infrastructure, come through local people changing attitudes, mobilising existing skills, improving networks, thinking differently about problems, and using community assets in new ways. Community development improves the situation of a community, not just economically, but also as a strong functioning community in itself.

Rural community development builds the five capitals of a community – physical, financial, human, social and environmental. It is through participation in their community that people rethink problems and expand contacts and networks; building social capital. They learn new skills, building human capital. They develop new economic options, building physical and financial capital. They also can improve their environment.

2.4.2 Improved accountability and services in key areas

To alleviate the earlier problems of over reliance on central governments as the main services providers, rural development programs were launched to improve on the accountability and services provisions in key development areas, especially the local people at the grass root levels and the disadvantaged like women as the main target of the program. This however, made NGOs and other development agencies to quickly learn that proper design and implementation of rural development programs could have ripple effects on promoting equity and inclusiveness, efficiency and good governance.

By effectively targeting and including the vulnerable and excluded groups as well as allowing communities to manage and control resources directly, it was evidential that rural development programs could allow poverty reduction projects to scale up quickly. Efficiency is therefore gained through demand responsive allocation of resources, reduced corruption and misuse of resources and promoting lower costs of service provision. (Tanaka 2006)

Cost recovery

Good governance is promoted by greater transparency and accountability in allocation and use of resources because communities in Abim district participate as whole in project decision making processes. This enhances a better quality and maintenance of greater utilization of resources and it also promotes the communities willingness to pay for goods and services provided and consumed through participating practically or mentally, for instance providing needed information and knowledge of the development challenges affecting their communities. Some principles of rural development such as participation, empowerment, accountability and non-discrimination are also worthy in themselves (Asians development bank 2008).

Poverty reduction

Sub projects that can increase the institutional and individual's capacity and for small communities have been promoted in the districts for instance there are groups who practice farming project in Angwee parish, grinding mills in Amanita parish, Abim sub county. This has created an avenue where the beneficiaries enjoy the services, mostly provided by the projects that they started in these parishes and the district at large.

2.4.3 Agriculture and natural resource conservations

The rural development program has impacted more on the livelihoods of the beneficiaries in Abim district especially in proportions of clean water supply and sanitation, waste management, education and health projects. These projects have been emphasized by the local communities of Abim in pursuit of better and improved life styles, improved agricultural production and a clean environment in the district, thus creating a positive impact on the community.

Participatory planning

Community involvement in the design, management and implementation of development projects and programs points out the actual control of decision making and project resources at nearly all stages of sub project cycles as distinguished in the Community development program manual and other rural development and projects.

2.4.4 Problems faced by rural development implementers

Inadequate funding and funds

inadequate funding from the government to finance the program and projects of rural development is one very big challenges with little percentages and amounts of money being portioned to supplement the performance of most programs and projects; for instance, in the last financial year 2014/2015, Abim district received a total amount of 46 million shillings to find the project, which implies that some groups have project, which implies that some groups have not yet benefited from the program.

Climatic hazards affecting agriculture.

Climatic hazards, poverty levels have risen, which results from the reduction in soil nutrients available, and further leads to decline in soil fertility. despite the importance of live stock keeping as a project of some rural development beneficiaries, to improve on crop production, little quantitative information was available on the impacts of climate hazards and livestock according to MAAIF et al 2010.

NEMA (2009); reports that during droughts, live stocks are occasionally attacked by foot and mouth diseases, which kills in most cases, the live stocks kept by some projects managers.

Inability of some members to repay the loans

inability of some members especially in Village Saving Associations and groups to repay the loans and debts “kalulu” have also contributed to the slow and lower levels of saving amongst the group members. This has therefore hindered the operation of these local financial institutions and deterred some members from getting this loans which could help them to generate some small incomes especially after investments.

Inadequate financial management skills

According to The underlying assumptions of rural development projects were, the communities are the best judges of how their lives and livelihoods can be improved with adequate resources

and information; they can organize themselves to provide for their immediate needs. Moreover, rural development programs are motivated by their trust in people however, these communities lack the required skill to manage the finances which they receive in form of funding and thus it has led to corruption and also the embezzlement and misuse of some funds by some beneficiaries (Naidoo and Finn 2001),

2.4.5 Possible solutions to the problems faced.

Extension and Mechanization of agriculture

Mechanization of agriculture and the extension of veterinary services should be promoted to help local farmers and also large scale farmers. According to Morris Rwakakamba, special presidential assistant in charge of research and information, the government needs to strengthen the current mechanization policy, commit funds for further research and for farmers and private sectors to acquire farm machinery and other equipments (Morris Rwakakamba)

Integration of environmental issues in agriculture

With assistance from NEMA, the main priority of this action would be to create awareness and establish consultative processes among the communities and to address the dangers associated with unsustainable agricultural practices. Along the baseline of research and survey which has been conducted to established support for the local communities through projects like woodlots and tree planting. This helps in environmental protection that provides demarcation for community participation.

Training and educating the local communities with new skills

The government however, has come up with many programs to help the local farmers improve on their and national agricultural advisory services (NAADS) has been the lead actor in this move. Farmers have been provide with new mechanisms through training on the use of improved seeds, equipments and farmers associations have been facilitated to go for education and conferences through the umbrella association of the farmers at the grass root level and at the

national level. This move is basically to help farmers improve on their production capacity and benefit more from the program and projects of rural development at the district.

In conclusion therefore, the project and program beneficiaries in the district should continue with the better life styles and rural development projects to generate small incomes that will raise the standards of living of the beneficiaries, thereby reducing on the poverty levels amongst the local communities.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter covered the research design, study population, the sampling procedure, the sample size, and the tools of data collection, the source of data and methods of data collection.

3.1 Research Design

During the study, exploratory research design was used to explore the issues concerning the ways through which desertification is influencing rural development patterns in Akokoro sub-county. This provided a base line on which appropriate conclusions were made on whether desertification has influenced or retards patterns of development.

3.2 Study Population

The study was carried out in Apac, 2002 population census found a population of 415,578 people in Apac. With a population growth rate of 3.5 per cent, the report projects a population of 490,688 people in 2007. The population density is 106 persons per km² which is relatively high for Africa, although the national average is higher, at 123 persons per km². In fact Uganda is the ninth most densely populated country in Africa which is of course one of the least populated continents in the world.

The study encompassed people of different social status including the local people of the area, the sub-county administration, local councillors, some officials from NGOs and the health sector in the sub-county. This was to help the researcher produce unbiased data and different views according to the perception of different people as far as desertification is concern.

3.3 Sampling Procedure

Simple random sampling was used to obtain the required sample number of respondent from survey population. This was done using the lottery/simple random sampling technique method so that the sample is not biased and is obtained by chance.

3.4 Sample Size

A sample size of 80 respondents was used for data collection during the study. These were obtained in the ratio of total population of local people, 60 community members, 4 sub-county administrators, 14 local leaders and 2 civil servants.

3.5 Tools of Data Collection

3.5.1 Questionnaire

Semi structured questionnaires were used to collect data from respondents who can read and write and who cannot have enough time to attend interviews sessions. The method was selected because it gave the respondents secrecy and convenience of filling the questions at their free time and after having enough time to think about the questions.

3.5.2 Interviews

Oral interviews were done in order to cater for those who did not know how to write especially the local people like women, elderly and the youth. This method helped the interviewer to probe the respondent since it involves face-to-face interaction. It helped to obtain data that was used to quote as the respondents explain answers at length.

3.5.3 Focus Group Discussion

The study organized groups of 5 people each and carry out a face to face interview with the help of the questionnaire distributed among the few for filling in and responding to the given questions for the purpose of entering it into SPSS.

3.6 Sources of Data

These are the alternative ways and areas from which the researcher obtained the data about the topic under study these include;

3.6.1 Primary sources

The researcher obtained data through Focus Group Discussions (FDGs), key informants and interaction with respondents it includes the data collected in the field.

3.6.2 Secondary sources

These are sources which the researcher extracts data that had already been written about the topic under study. This made up the literature review, which helped the researcher to site areas of agreement and disagreement after the field study. These sources include; the textbooks, internet, related dissertations, journals, reports, newspapers and other publicised articles.

3.7 Data Analysis

Data collected was analysed both qualitatively and quantitatively, Bio data of respondents was analysed using frequency tables and the extent of desertification on rural development mean and standard deviation were used. Qualitatively, the thematic analysis was used through editing and coding related data into themes, which were used to draw conclusions about the study.

Quantitatively, computer packages was used to change the coded themes into simple percentages that was presented inform tables and pie-charts these helped to discuss the findings about the study. Computer packages included Microsoft word and Microsoft excel.

3.8 Ethical considerations

It is important during the process of research for the researcher to make respondents to understand that participation is voluntary and that participants are free to refuse to answer any question and to withdraw from participation at any time they have chosen.

Another important consideration, involves getting the informed consent of those going to be met during the research process, which involved interviews and observations on issues that may be delicate to some respondents. The researcher undertakes to bear this seriously in mind.

3.9 Limitations of the Study

Lack of co-operation by some respondents was constraint to this study. Its common under rural development for research to be viewed in a negative way. This study however will emphasize to the respondents that the study is purely for academic purposes. Also where people still feel reluctant to participate in spite of the assurances the study will resort to willing and available respondents.

Limited time is already foreseen in this study. To overcome this constraint, a sample of 80 people will be chosen to participate in the study. Attempts were made to stick to the deadlines that were pre-set before the study is done.

Language was a barrier in some areas which necessitated the use of translators in which case, it was difficult to exhaustively probe or follow through some notions to their logical conclusion especially during qualitative data collection sessions which included focus group discussions and individual interviews.

The primary school where at times hard to access the information since most communities where having inadequate information and close as a result of the desertification that is in relation to development.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter covered the analysis, presentation and the discussion of the findings of the study. This was done according to the research objectives and research questions.

4.1 Demographic of respondents

This was aimed at finding out how the various features of respondents influenced the outcomes of the study

4.1.1 Gender

This was intended to find out how the different category of people participated in the study and how each gender perceived desertification and rural development

Table 1: Showing Gender Distribution of respondents

Gender	Frequency	Percentage
Male	47	59
Female	33	41
Total	80	100

Source, *Primary Data, May, 2017*

From the table I above, the study found out that the majority of the respondents were males. The number of males who took part in the study reached 47(59%) as compared to 33(41%) of the female respondents

The difference in percentage arose due to the fact that most men are the ones involved most desertification-like causing activities like overgrazing of animals in one area over time, cutting

down forest for fencing kraals and burning bushes and charcoal to sell. On the contrary even in the general population the distribution of women was generally lower than that of men.

4.1.2 Marital status of the respondents

The marital status of the respondents were also captured and analyzed to assess their ideas in relation to the research topic. This included those who were married, single, widowed and separated

Table 2: Showing Marital Status of the Respondents

Marital status	Frequency	Percentages
Married	37	46
Single	26	32
Widowed	07	9
Separated	10	13
Total	80	100

Source, *Primary Data, May, 2017*

Given the above table, majority of the respondents say 37 (46%) were married and those were following by respondents who were single constituted 26 (32%) then 07 (09%) who were widowed, and finally, 10 (13%) comprised of those ones who had separated.

Above all, these respondents irrespective of their status were willing to provide the information that was required by the study that aided in the process of understanding the study problem that was under serious study.

This variation in the percentage of respondents according to their marital status was attributed to many reason which included, by the time the researcher collected the data the majority of single people who are mostly the students were at school thus did not have a chance to interact with researcher, the high percentage of married was a manifestation that the large number of people got married at an early age and it was the married people who largely influenced the activities that take place in the communities due to the responsibility they hold of maintaining and sustaining their families

4.1.3 Education levels

This was intended to examine the education level of the respondents. This helped the researcher to determine how education of a respondent affects how much he is informed about desertification and rural development.

Table 3: Showing Education Levels of Respondents

Levels of education	Frequency	Percentages
Primary level	15	19
Secondary level	8	10
Tertiary level	5	6
Total	80	100

Source, *Primary Data, May, 2017*

From the research findings, 65% showed that this percentage was knowledgeable on issues related to the research and this helped them to elaborate more on desertification, 19% had relatively little knowledge although they could give the basis of the in for information, while 10% were also able to give the depth of desertification. The highest percentage of respondents was found out to be of the tertiary level of education. These are people who were employed as civil servants and local government officials who were the principal focus of the study. However, This was considered important because education plays an important role on ones level of understanding about the policies that government comes up with of which desertification ordinance is among,

4.1.4 Designation

This was aimed at finding out the designation of the respondents so as to assess whether desertification and rural development contributed any role on the designations of various people.

Table 4: Showing the Designations of Respondents

Designations	Frequency	Percentages
Farmers	43	47

Civil servant	22	26
Chairperson	1	1
Business man	7	7
Councilor	6	6
Sub county chief	1	1
Total	80	100

Source, *Primary Data, May, 2017*

From the study findings, 43% This high percentage of farmers was attributed to high unemployment in the formal sector which made people resort to farming as the only source of employment, 26% constituted civil servants and this is because of their qualifications, 15% chairpersons of local councils this was because of their political ability, 07% of the respondents were councilors and business men respectively, while only 1% was the sub county chief.

The high percentage of farmers was attributed to high unemployment in the formal sector which made people resort to farming as the only source of employment. These people were involved in maize, sorghum, cassava and ground nut growing and animal rearing was also being practiced. Other respondents were employed as civil servants in the health sector, education sector and in the local government administration while a small percentage was employed in business which included small scale retail shops and bars.

4.1.5 Religious affiliation

This was intended to establish the level of participation of people in the improvement of rural development and reducing desertification according to their religions.

Table 5: **Showing Religious Affiliations of Respondents**

Religious affiliation	Frequency	Percentages
Christians	57	72

Moslems	02	02
Others	21	26
Total	80	100

Source, *Primary Data, May, 2017*

Basing on the research results, 72% were Christians, 02% of the respondents were Moslems and 26% of the respondents indicated that they belonged to other religions. However, this difference in religious affiliation percentages did not affect the results of the study because all respondents were highly involved in the implementation of the strategies of improving desertification and rural development but only that the difference was attributed to the general distribution of these religious denominations in the general population that is unequal.

4.1.6 Definitions of desertification according to respondents

This was intended to find out how respondents understood what decentralization policy was. This would provide an insight to the researcher whether respondents would understand the concepts of the study.

Table 6: Showing the Respondents Definitions of Decentralization

Definitions	Frequency	Percentages
Development of dessert like conditions	11	14
Poorly managed agriculture	04	05
Deforestation and tree cutting	42	53
Burning grass during the dry season	23	28
Total	80	100

Source, *Primary Data, May, 2017*

From the study findings, 14% defined desertification as the development of dessert like conditions, 05% of the respondents define it as bringing poorly managed agriculture, 53%

defined it as Deforestation and tree cutting the and 28% of the respondents defined burning grass during the dry season.

These results concur with those of Matahabalo (1998); who defined desertification as the development of desert-like conditions in the region that have been experienced as a result of human disturbance such as; Deforestation and tree cutting, burning grass during the dry season, overgrazing, drought, floods, famine, livestock and human diseases and poorly managed agriculture

From the advanced definitions it shows that respondents understood the desertification as they were able to bring out the most important concepts in the desertification which included desertification as the development of desert-like conditions in the region that have been experienced as a result of human disturbance.

4.1.7 Types of Season Visa Vies Longevity

This was intended to examine the types of seasons. This helped the researcher to determine how types of seasons affect socio economic development.

Table 7: Showing Types of Seasons

Types of seasons	Frequency	Percentages
Dry	58	76
Wet	22	24
Total	80	100

Source, *Primary Data, May, 2017*

From the research findings, 76% showed that this percentage that is dry season which is a dry spell with much sunshine, too much wind blowing throughout the eight month and this has reduced the agricultural season of the area and people have resorted to other alternatives like mining. 24% showed that from June- October every year the area has been affected by strong hailstorms and many floods which also destroyed houses and crops

4.2 Socio-Economic Activities

Table 8: Showing Socio economic activities that led to desertification

Socio economic activities	Frequency	Percentages
Pastoralism	30	38
Charcoal burning	30	38
Fire wood collection	20	24
Total	80	100

Source, *Primary Data, May, 2017*

From the research findings, 38% showed most of the people within the research area concentrated on both pastoralism and charcoal burning as alternatives because the land was unable to produce good yields and due to that this socio economic activities affected the land texture. 24% also showed that fire wood was another economic activity that causes desertification.

4.2.1 Effects of desertification on development

This was intended to examine the effects of desertification on development. This would help the researcher to determine how desertification affects rural development.

Table 9: Table showing effects of desertification on rural development.

Effects	Frequency	Percentages
Low productivity	37	43
Ill health	21	28
Infertility of land	22	29
Total	80	100

Source, *Primary Data, May, 2017*

From the research findings, 47% showed that when there is too much wind blowing away the top soils, flooding the fertile soils which are too productive are lots and this will led to low production of groups. 28% showed that the number of people will fall sick because they do not have enough food to eat to maintain their nutrition. 29% showed that due to over cultivation of one piece of land time and again and the wind blowing away fertile soils leaves the land bear hence low productivity.

4.2.2 Human activities that contribute to desertification

This was aimed at finding out the designation of the respondents so as to assess whether decentralization contributed any role on the designations of various people.

Table 10: Showing Human Activities that are contributing to Desertification

Human activities	Frequency	Percentages
Farming	54	68
Mining or quarrying	23	27
Hunting	03	05
Total	80	100

Source, *Primary Data, May, 2017*

From the study findings, 68% this high percentage of farming was attributing to high desertification in the research area where by people over cultivated one piece of land for a long time and over exploited the fertility of the land. 27% and 05% showed how people over used land for mining and hunting respectively as alternatives of survival because most of the land they were using was exhorated.

4.2.3 Rating on the Impact of Desertification on Agriculture.

This was aimed at establishing the impact of desertification on agriculture

Table 11: Showing Rating on the Impact of Desertification on Agriculture

Rating	Frequency	Percentage (%)
High	39	52
Moderate	22	29
Low	19	19
Total	80	100

Source, *Primary Data, May, 2017*

Basing on the research findings, 52% indicated that in Akokoro sub-county, Uganda, high levels of desertification were manifested and these were seen in the long dry spell within the area which stayed for more than eight month and 29% showed moderate where by some times rains are there but wing is still too much and lastly 19% indicated that there low desertification because people continued even to harvest little products although the weather was not favoring.

4.3 Significance of Eradicating Desertification as a Contribution to Rural Development of Akokoro sub-county, Uganda

This was intended to examine how desertification contributes to rural development of Akokoro sub-county, Uganda.

Table 12: Showing the Significance of Eradicating Desertification as a contribution to Rural Development of Akokoro sub-county, Uganda

Significance	Frequency	%
Employment	59	34
People are selecting their own projects of IGAs	41	24
People decide for how many trees to plant or how to use their resources	12	07
Equal distribution of resources	24	14
Communities are involved in the planting of forests and woodlots	37	21
Total	137	100

Source, *Primary Data, May, 2017*

From the research findings, 34% showed that eradication of desertification was contributing employment opportunities to the people of Akokoro sub-county, Uganda. This was being attained through engaging in income generating and planting woodlots which earned them cash and this helped them to raise the standards of living for their homes and provide the necessary basic needs and access other social services to the family members.

From the study results, 24% indicated that people were selecting their own projects of IGAs depending on competencies of people to perform to the expectations of the sub county. This helped individuals to develop because only people who can work for communities can be selected to benefit from more projects. This makes people cooperative and can aim for development of their community.

Basing on the research findings, 07% showed that people were deciding for how many trees to plant or how to use their resources for development of their communities. This involved on how to use the community development fund which is a 25% share of taxes that the central government takes back to the sub county for development people took decisions on how to allocate seedlings to various groups including development of cattle markets, rural feeder roads, education and health development. This makes people choose how to use their resources depending on the needed service for development.

From the study findings, 14% showed that eradication of desertification has led to equal distribution of resources among the people in Sub County. This was because of the fact that every village had a representative on the various committees in the area and from these committees every village would be allocated an equal share which led to development of the area.

From the research findings, 21% indicated that through the eradication of desertification, communities were involved in planting forests and woodlots. These forests and woodlots helped communities to recover the destroyed vegetation cover that was reducing the agriculture productivity. They also helped people in gaining cash which they can use to access the social service like schools and hospitals. These are all important aspects of development which the people were benefiting from.

4.4 Challenges Faced By Implementers on How to Reducing Desertification and Improving Rural Development in Akokoro sub-county, Uganda

This was aimed at examining the challenges that are affecting eradication of desertification in Akokoro sub-county, Uganda and how these challenges are affecting rural development.

Table 13: Showing the Challenges faced by implementers on how to Reducing Desertification and improving Rural Development in Akokoro sub-county, Uganda

Challenges	Frequency	Percentage
Corruption and embezzlement of government funds	36	45
Inadequate seedlings and other equipment	12	15
Low levels of funding from central government	15	19
Ignorance of the local population	09	12
Resistance of people to mechanization	08	09
Total	80	100

Source, *Primary Data, May, 2017*

From the study findings, 45% showed that desertification and rural development was being challenged heavily by the problem of corruption and embezzlement of public funds.

These are the funds that were being got from the central government to fund the activities for community development and the money collected from taxes that people in the area pay to the local administrative units. This money is usually misappropriated and used for personal gains.

From the study findings, 15% showed that inadequate seedlings and other equipment's within Akokoro sub-county, Uganda was challenging the effectiveness to the fight against desertification and improving rural development. This was hindering the planting of trees and woodlots in the area and accessibility to the seedlings was difficult in rural villages in the area. This made implementation of the program difficult because the government officials and the communities were not able to access the equipment's to use.

Basing on the research results, 19% indicated that there was low funding from the central government to the local government to run the planned activities. This was limiting the performance of communities' in fighting desertification and improving rural development because the local governments were failing to carry out their activities which involved forming farmers groups registering people to participate in trees planting. This was because the funds provided were not enough to meet the budgets of local administrative unit's activities.

Basing on the research results, 12% showed that people were ignorant and did not have adequate skills of how to plant trees. This was challenging the program because people were not responding to the demands from the local government officials who included planting forest and woodlots, crop rotation and practice proper pastoral activities. This ignorance and inadequate skills made work difficult to give the necessary support for the development of the area.

From the study results, 09% showed that people were resisting mechanization methods which help to retain the vegetation cover within the agricultural fields in the sub county. This was because people perceived this as the role of the central government to fund all its administrative units and support all development programs in the area.

4.5 The Hindrance to Solving the Challenges Experienced During the Fight against Desertification and Improving Rural Development in Akokoro sub-county, Uganda

This was aimed at finding out what were the hindrances to eradicating desertification and encouraging rural development in Akokoro sub-county, Uganda.

Table 14: Showing the Hindrance to Solving the Challenges Experienced during the fight against Desertification and improving Rural Development

Respondents Responses	Frequency	Percentage
Poverty	41	51
Poor payment of government officials	12	15
Lack of follow up to the implementation of the program	09	10
Poor communication networks in the area	03	07

Low mobilization and sensitization of communities	15	17
Total	80	100

Source, *Primary Data, May, 2017*

From the study results, 51% showed that poverty was a major cause of challenges experienced by desertification and rural development. This was the primary reason as to why people were not involved in planting trees, buying seedlings and failure to contribute development resources to the projects initiated by the sub county administration because people were not earning what was enough to sustain them.

From the research findings, 15% showed that poor payment of the government officials at the local government level de-motivated them from the fight against desertification and encouraging rural development and of the most prominent were corruption and embezzlement of public funds and low motivation among the officials to concentrate on the promotion of the program. This was retarding the success of the fight against desertification and encouragement of rural development in the area of study.

Basing on the research findings, 10% indicated that lack of follow up to the implementation of the fight against desertification and encouragement of rural development was causing administrative challenges and the officials were just relaxing and not fulfilling their duties as there was no one to monitor and evaluate how these people were implementing the program. This caused weaknesses in the system thus making it look to people as the alternative way through which the government wants to take their resources.

From the study results, 07% showed that the prevalence of the poor communication networks in the area was another cause to the challenges that the eradication of desert like conditions and rural development was faced in Akokoro sub-county, Uganda. This was because the rural feeder roads were in bad condition and could be used during the dry seasons. This denied government officials a chance to access such rural areas and deliver social services as the movement of material into these areas would be very difficult.

From the research results, 17% of the responses indicated that low mobilization and sensitization efforts to communities were another cause to the challenges that desertification and rural development faced.

This stemmed from the fact that most of the politicians were not interested in the program which they based on political differences. This had denied local communities a chance to get sensitized about the need to support the program and how people would benefit from the program as well.

4.6 Methods used in fighting desertification and improving rural development in Akokoro sub-county, Uganda

This was aimed at establishing the various ways through which desertification has been improved in the area of study.

Table 15: Showing the methods that community members are using to fight Desertification and improve Rural Development in Akokoro sub-county, Uganda

Methods of improvement	Frequency	Percentage
Community mobilization and awareness creation	39	25
Afforestation	13	08
Commercialized agriculture	22	14
Provision of IGAs	35	22
Mechanizing agriculture	48	31
Total	80	100

Source, Primary Data, May, 2017

Basing on the research findings, 25% indicated that in Akokoro sub-county, Uganda people were being mobilized and are made aware of the way of improving deserts-like conditions and rural development. This was being done through the local government officials holding consultative meetings with local people on the things that influenced their lives local leaders in collaboration with local government leaders like sub county chiefs and councilors usually held

meetings to decide on how to bring about development of the area and this showed greatly that desertification and rural development were improved.

From the study results, 08% showed that as one way to improve desertification in Akokoro sub-county, Uganda afforestation was being emphasized. This was being done through allowing people to plant trees participate in the watering them until they grow and it was also free for any individual to plant as many as one washes to plant. This gave people a right and powers to influence their communities to do so.

From the study findings, 14% showed that local government was encouraging commercialized agriculture as a way of practicing rural development in Akokoro sub-county. This was being done through the ministry of agriculture by extending the NAADS and NUSAF programs to the sub county through recruiting NAADS coordinators to represent the central government at the sub county level and giving them to carry on with implementation of the work on behalf of the government.

Basing on the research results, 22% indicated that rural development and reduction of desert like conditions was being practiced through provision of income generating activities this was being done through training communities with life skills and providing them with livelihood projects like piggy, poultry which will earn them incomes and how to use and distributed community resources.

Basing on the study findings, 31% indicated that desertification was being practiced through mechanizing agriculture. It was found out that mechanized agriculture would reduce desertification. The NAADS coordinators also formed farmers forums and farmers groups at every village and trained them of modern method of farming so as to reduce over cultivation effects which result to desertification.

4.7 How the government is promoting the fight against desertification and rural development in Akokoro sub-county, Uganda

This was intended to examine how the government was promoting the fight against desertification and rural development in Akokoro sub-county, Uganda

Table 16: Showing how the Government is promoting the Fight against Desertification and Rural Development in Akokoro sub-county, Uganda

Ways of promoting	Frequency	Percentage
Establishing local courts of law (LC)	27	33
Creation forest reserves and woodlots	40	50
Democratic selection of farmers groups	09	12
Participation of community in massive tree planting	04	05
Total	80	100

Source, *Primary Data, May, 2017*

From the study findings, 33% showed that the government was establishing local courts to administer law and justice in the local communities. These courts were helping to reduce on the volume of incidences of deforestation and other desert like human activities. These courts were handling petty cases that occurred in the area by solving them amicably bring harmony in the area.

Basing on the research findings, 50% indicated the government was creating new forest reserves and woodlots to help in the conservation of the soil cover and increase the formation of rain fall and reaching out of services to every individual in Akokoro sub-county, Uganda.

From the study results, 12% showed that the government was encouraging people to participate in the fight against desertification and encouraging rural development of their communities by democratically selecting their own local farmers groups. This would help to fight desertification and encourage rural development.

Basing on the research findings, 05% indicated that the government promoted participatory approaches to development through participation of communities massively in tree planting. This involved following people to participate in community work for cash so that they can select what is appropriate for them either legally, economically or socially.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter states the major study findings on desertification and rural development in Akokoro sub-county, Uganda. It also presents the conclusion and recommendations of the study arising from the study findings. The first section presents the summary of findings. This is followed by a presentation of the conclusion and recommendations in relation to the study research objectives.

5.1 Discussion

5.1.1 The extent of desertification in Akokoro sub-county

The study found out that there are high levels of desertification were manifested and these were seen in the long dry spell within the area which stayed for more than eight month and 29% showed moderate where by some times rains are there but wing is still too much and lastly 19% indicated that there low desertification because people continued even to harvest little products although the weather was not favoring.

5.1.2 The extent of development in Akokoro sub-county

The study indicated that desertification was leading to reduction of rural development in that most of the people were not in position to engage in their usual agricultural activities like farming and livestock rearing because the rain was inadequate for crops, pasture and water for their animals and all this has made people move to nearby settlements like Ayei, Wansolo and Kungu because this areas were still not yet affected by human destruction like cutting down of trees for firewood and overgrazing

5.1.3 There is significant relationship between the level of desertification and the level of development

There is significant relationship between desertification and rural development in Akokoro sub-county, Uganda. This was seen in the low engagements of the local community in economic activities because their agricultural yield was too low as they usually depend on their agricultural products to sell in markets to earn income and because of this, there is low standards of living.

5.2 Conclusions

5.2.1 The extent of desertification in Akokoro sub-county

It was concluded that the majority of the respondents understood what desertification and rural development was all about as they were able to give definitions that contained the concepts of desertification and rural development including desert like conditions, destruction of vegetation cover and long spell of drought for more than five months which has affected the agricultural activities of people which has reduced rural development within their communities.

The programmes of eradicating desertification and improving rural development like NAADS, NUSAF and NUREP faced a lot of challenges which included corruption and embezzlement of funds from the central government, local leaders and the implementing agencies and the low levels of funding from the central government.

5.2.2 The extent of development in Akokoro sub-county

It was also concluded that the government was practicing mechanisation programmes like provision of fertilizers, use of tractors for cultivation, provision of improved seeds in the area through various ways including the plan for modernisation of agriculture through NAADS (national agricultural advisory services)

How the responses provided by the respondents about desertification and rural development contributed a lot of the development progress to Akokoro sub-county, Uganda. This was because it created employment to the people, resources were being distributed equally to the people, resources were being distributed equally to the people and people applied the modern methods of

farming which enhance them with more outputs hence leading to rural development of communities.

It was concluded that people were heavily dedicated to the success of the rural development as they actively participated in the eradication of desert like causing factors like over cultivation, overgrazing and firewood fetching within their communities and contributed resources to the projects started under the programmes.

5.2.3 There is significant relationship between the level of desertification and the level of development

However, on the contrary some people were refusing to support the idea of reducing or eradicating desertification and encouraging rural development as they were refusing to participate in tree planting, use of modern methods of farming and engaging in other alternatives of life like commercial trading which enhances rural development.

It was concluded that the challenges were being caused by various factors which included poverty, poor payments to the government officials, and lack of follow ups in the implementation of the desertification and rural development projects. This was heavily affecting the effectiveness of the projects.

However, the government was doing all that is needed to promote rural development and eradicating desertification in the area and the most prominent way was through promoting of afforestation and re-afforestation, strengthening policies and laws guiding the indiscriminate cutting of trees, establishment of local court and the creation of new administrative units so as to reach out to every community.

5.3 Recommendations

5.3.1 The extent of desertification in Akokoro sub-county

There is need for massive education of the local communities on the importance of vegetation conservation and sensitizing them of the effects of bush burning so as to reduce the likely effects of desertification and as a result it will improve on rural development

Politicians should stop confusing people about government policies that are aimed at developing communities due to political differences because this will hinder people's development.

5.3.2 The extent of development in Akokoro sub-county

The government should carry out an intensive sensitization of communities about every programme and policy that it brings to the people. This will highlight the importance of the programme and policy to the people and this will give them moral to solicit for its support.

The government should increase its funding to the local government units at the lower level of administration. This will help them to meet their planned targets and provide the necessary resources to the people.

People should always be determined to support government policies and programs that are aimed at their own development by mobilization of the local available resources and evaluating the effectiveness of the programmes themselves.

5.3.3 There is significant relationship between the level of desertification and the level of development

Government officials should have a good will for the development of the communities they lead; this will need self-motivation to work and using the public funds for the purposes it is intended for without embezzlement and misappropriation.

Need to strengthen indigenous, administrative and political skills needed for environmental and natural resource management, Influencing behavioral change and attitudes so as to act as an incentive to sustainable land use through;

Promoting soil conservation practices, Controlling and managing bush fires, Management of both domestic and industrial wastes, Management and protection of local forests/vegetation, Capacity building, monitoring, inspection and supervision and Formulate and enforce policies ordinances and by-laws.

REFERENCES

- Amoding A. and Tenywa J. S. (2002) , Urban crop waste for soil fertility improvement in crop production system. Pgs 133-137 in: soil science society of East Africa 20th conference proceedings. 2nd-6th Dec 2002, Mbale Uganda.
- Byrne, Bridgit and Sally Baden, (1995) „Gender, emergencies and humanitarian assistance, BRIDGE Briefings on development and Gender, November.
- Cannon, T., 1994. 'Vulnerability analysis and the explanation of 'natural' disasters' in Varley, A. (editor), Disasters, Development and Environment, John Wiley and Sons, New York.
- Chhandasi Pandya. (2006). Private Authority and Disaster Relief: The Cases of Post-Tsunami Aceh and Nias. Critical Asian Studies. Vol. 38, No. 2. Pg. 298-308. Routledge Press: Taylor & Francis Group
- David Lewis and Nazneen Kanji (2009): Non-Governmental Organizations and Development. New York: Routledge.
- Edkins, Jenny. *Whose Hunger?: Concepts of Famine, Practices of Aid*. Minneapolis: University of Minnesota Press, 2000. 20.
- Edwards, M. and Hulme, D. (2002) NGO Performance and Accountability: Introduction and Overview. "In: Edwards, M. and Hulme, D., ed. 2002." The Earthscan Reader on NGO Management. UK: Earthscan Publications Ltd. Chapter 11.
- FAO. 2006. Karamoja Participatory Livestock Needs Assessment
- FAO. 2008. Food Security and Agricultural Livelihoods Cluster. Plan of Action for Northern Uganda. (2008-2009)
- GOU. 2005. Uganda National Report and information on disaster risk reduction efforts for the world conference on disaster reduction. (Kobe-hyogo, Japan,18-22 January 2005)

GOU. 2009. Karamoja Action Plan for Food Security (2009-2014). Karamoja Agricultural and Pastoral Production Zones.

Grant B. Stillman (2006), NGO Law and Governance: a resource book, ADB Institute, Tokyo, ISBN 4-89974-013-1.

Keen, David. *The Benefits of Famine: A Political Economy of Famine and Relief in South-western Sudan, 1983-1989*. New Jersey: Princeton University Press, 1994. 4.

MajaliwaMwanjalolo, E. Nkonya, F. Place, J. Pender and P. Lubega. Case Studies of Sustainable Land Management Approach to Mitigate and Reduce vulnerability to climate change in Sub-Saharan Africa: The case of Uganda.

Teegen, H. D. (2004). "The importance of nongovernmental organisation in global governance and value creation: an international business research agenda" in *Journal of International Business Studies*. Washington: Vol. 35, Iss.6.

Weber, N. and Christopherson, T. (2002) The influence of non-governmental organisations on the creation of Natura 2000 during the European policy process. *Forest policy and Economics*. 4(1), pp. 1-12.

Biggs, S. 1999 Community Capacity Building in Queensland: The Queensland Government Service Delivery Project. Unpublished paper. Office of Rural Communities, Brisbane, Queensland.

Commonwealth of Australia, 1996 State of the Environment Australia Report. Commonwealth of Australia, Canberra.

APPENDIX I
QUESTIONNAIRE

I am a student of Kampala International University. I am doing my research on desertification and rural development: case study area of Akokoro sub-county” This is part of the requirements for the fulfillment of the award of a degree of development studies of Kampala International University. The information provided here was treated confidentially and only be used for the academic purposes intended for.

Therefore you are kindly requested to answer the following questions according to the best of your knowledge by either ticking on the right option or filling in the blank spaces provided.

SECTION A: BIOGRAPHIC DATA

1. Name (optional).....

2. Gender

(a) Male

(b) Female

3. Age

(a) below 20

(b) 20-30

(c) 31-40

(d) 41-50

(e) 50 and above

4. Marital status

(a) single

(b) married

(c) divorced

(d) widowed

(e) separated

5. Level of education

(a) primary

- (b) secondary
- (c) tertiary
- (d) Others (specify).....

6. Designation

- (a) Farmers
- (b) sub county chief
- (c) councilor
- (d) business men
- (e) chairperson

7. Religious affiliation

- (a) Christian
- (b) Moslem
- (c) Others (specify)

8. Location.....

SECTION B: INFORMATION ON BENEFITS OF DESERTIFICATION ON RURAL DEVELOPMENT

8.How does desertification promote rural development of people in Akokoro sub-county?

.....

9. What is the attitude of people towards desertification in this area?

.....

SECTION C: INFORMATION ON THE CHALLENGES OF DESERTIFICATION IN AKOKORO SUB-COUNTY.

10. What challenges do you experience while trying to reduce desertification in Akokoro sub-county?

.....

11. How do these challenges affect the efficiency of desertification in the promotion of rural development in Akokoro sub-county?

.....
.....

SECTION D: INFORMATION ON SOLUTIONS TO CHALLENGES OF DESERTIFICATION IN PROMOTING RURAL DEVELOPMENT.

12. In what ways is government trying to help in the promotion of rural development?

.....
.....

13. Of the above mentioned ways which one is being more effective in solving the challenges of desertification?

.....
.....

14. How is the government working with people to solve the challenges people are facing in promoting rural development?

.....
.....

APPENDIX II:

INTERVIEW GUIDE FOR THE LOCAL COMMUNITY

1. What do you understand by the term desertification?
2. What are the types of desertification?
3. How has desertification affect rural development in this sub county?
4. What ways are being used to administer desertification effects in this sub county?
5. What could be the aims and reasons of rural development in this area?
6. How does desertification benefit the rural development of people in Akokoro sub-county?
7. What is the attitude of people towards desertification in this area?
8. What challenges do you experience while trying to fight desertification and promoting rural development in Akokoro sub-county?
9. How do these challenges affect the efficiency of desertification ordinance in the promotion of rural development in Akokoro sub-county?
10. What are you doing to solve the causes of desertification?
11. What ways are you using to help people benefit from the opportunities provided by the desertification?
12. What organizations are helping you to realize the importance of rural development in Akokoro sub-county?
13. How are they helping you reduce gender inequality?
14. What roles has the government played to help people to promote rural development in Akokoro sub-county?
15. What is your opinion about desertification and rural development in Akokoro sub-county?