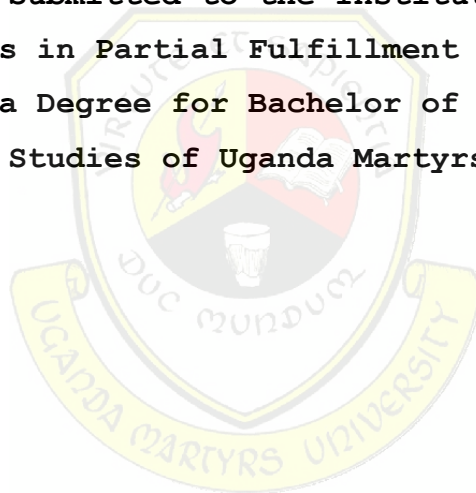


**A PARADOX OF CAPITALISM AND ENVIRONMENTAL WELBEING: A STUDY OF  
FINANCIAL MOTIVATION BEHIND ENVIRONMENTAL DEGRADATION.**

**CASE STUDY: BUWUNGA SUB-COUNTY, MASAHA DISTRICT.**

**A Dissertation Submitted to the Institute of Ethics and  
Development Studies in Partial Fulfillment of the Requirements  
for the Award of a Degree for Bachelor of Arts in Ethics and  
Development Studies of Uganda Martyrs University.**



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## **Dedication**

This dissertation is dedicated to my beloved brother Mr. Kabiito Benedict, My parents Mr. and Mrs. Lubega Matthew, my siblings Wamala Charles, Kalanda Mike and Kibira Peter plus my true friends Apiny Irene Scovia, Alimo Leah Patricia and Ofoymungu Vivian.

## **Acknowledgement**

I would like to thank the Almighty God for helping me go through my academics. With great humility I would to extent my gratitude to my beloved brother Kabiito Benedict, my parents Mr. and Mrs. Lubega Matthew for their encouragement, financial and moral support through my education but in particular during the process of writing this research work.

With great honor, I would like to thank my supervisor, Mr. Ssenooba George William for the guidance and efforts extended to me during this research work.

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## **List of abbreviations**

<b>NEMA</b>	National Environmental Management Authority
<b>UNEP</b>	United Nations Environment Program



## **Abstract**

The study sought to investigate the financial motivation behind environmental degradation which is responsible for the deteriorating state of environment in Buwunga Sub-deterioration is majorly attributed to the capitalistic view of searching for money.

The specific objectives of the study included: to identify commercial activities responsible for environmental degradation, to find out the effects of commercial activities on the environment and to come up with strategies that can reduce environmental degradation.

The research used a case study design using a qualitative and quantitative research methodology. The study involved a total of 45 respondents namely: commercial agriculturalists, commercial constructors, environmental officials and local council leaders. Purposive sampling was used to select respondents in order to yield the right information. Data was collected by use of questionnaires and interview guides. It (data) was analyzed using tables and themes derived from specific objectives.

The findings from the field showed that capitalism has greatly increased the rate of environmental degradation. This is so because as people search for incomes, they so do it with the while considering the two factors namely: reduction of the cost of production and maximization of profits however, during the production process, they do not care about the environment. This has degraded the environment in many ways like deforestation, soil erosion and pollution.

Through sensitization, community based conservation, formulation and implementation of laws, and giving penalties to culprits of environmental degradation can reduce the rates of environmental degradation.

## **CHAPTER ONE**

### **GENERAL INTRODUCTION**

#### **1.1 Introduction**

The study was interested in investigating the apparent inconsistency between the capitalistic tendency of excessive conversion of natural resources into money, and its undermining environmental wellbeing. In particular, this study advances an argument that uncontrollable search for money is responsible for the widespread environmental degradation in Uganda. The study was carried out in Bwungu sub-county, Masaka District, to find out how financial motivation, which is a feature of capitalism, has led environmental degradation in the sub-county.

The study is composed of five chapters namely; Chapter one which gives a general introduction, chapter two provides literature review, chapter three provides the research methodology, chapter four provides presentation and discussion of data as obtained from the field and chapter five gives the summary, conclusions and recommendations of the study. Chapter one introduces the key terms and concepts which are; environment, capitalism, paradox, environmental degradation and financial motivation.

The background of the study, which gives an overview of the study and discusses evidence and opinions of how the financial drive undermines environmental wellbeing, at both global and local levels. The statement of the problem and the objectives follow, and the research questions which are derived from the objectives. In this chapter, I discuss the scope, significance and justification of the study. In other words, this forms a basis upon which the rest of the work is built.

## **1.2 Background of the study**

In the pre-capitalist times, land was an instrument of political and military power. Its use and ownership was determined by legal and customary rules rather than by a market mechanism based on profit. The economic exploitation of land, was therefore entirely, subordinated to social motivations to the needs of the feudal lords, the family and the wider community. Even though land played an essential role in the acquisition of social status and political power no significant exchange of it took place outside of the traditional social institutions (Wim 2009) and Wallenstein (1984)

According to Wim (2009), the gradual marketization and privatization of land led to departure from these century-old practices which also brought feudalism to an end. In addition, the social upheavals led to the expropriation of agricultural population from the land whereby it was no longer on communal grounds, dividing them and where necessary evicting the original inhabitants. With this, a large group of landless workers was created and therefore subsequently became to be dependent on capitalist farmers for income.

The Commodification of land led subsequent creation of a working class dependant on wage labour and this is directly relevant to environmental degradation. In this case, environmental degradation should be viewed as a gradual, historical process that predates the existence of capitalism. With the decline of subsistence farming, the commodification of land, the rise of capitalist farming and the abstraction from nature, the natural basis of society was lost capitalism farming where the objective of providing food for profit making resulted in drive to increased crop yield and heightened productivity level. However, this is not only limited to land and agriculture but it also entails other

natural resources and other economic activities. The capitalist operations fosters the physical and intellectual separation of human from their natural environment leading to its degradation Wim (2009).

"Environmentalism is dead. What's next?", was a disturbing question of Werbach (2005), when he realized that 'environmentalism' is being displaced by 'capitalism'. Like Werbach (2005), there are many other pieces of literature that strongly show that capitalism is inherently anti-environmental (Sullivan, 2011 and Sullivan, 2014). Therefore, any thinking that 'money' (as proceeds of capitalism) will promote environmental conservation is highly questionable. Pope Francis (2015) in *Laudato si*, relates capitalism to 'greed'. He wonders whether 'greed can ever be green'. The puzzle is whether it is possible to run an expanding capitalist economy while keeping its impacts within the ecological boundaries or whether the greed-driven system is an effective suicide machine that is doomed to destroy itself?.

To many, it is agreeable that the largest part of the environmental problem has its origin in the functioning of the world's (capitalistic) economy, which is more than three centuries old now (Pope Francis, 2015; Juniper, 2015; Brooks, 2006 and Sweezy, 2004). This period saw the emergence of capitalism, middle class, and industrial revolution, in addition to emergence of "coal and steam and railroads of steel and electricity and chemicals, of petroleum and the automobile, of mechanized and chemicalized agriculture - and of the rapid expansion and urbanization of the world's population in response to the massive growth of the forces of production at the disposal of humankind (Sweezy, 2004).

This research is interested in studying the role desperate search for money plays in environmental destruction experienced in Uganda and the world over. Whereas it is clear

that the desire to accumulate wealth, manifested in exercising control over the means of production and maximization of profit lead to environmental degradation; there are local, national and international voices and agencies thinking that availing more funds is the best way to insure environmental conservation (Sullivan, 2014).

Jim (n.d) makes efforts to conceptualize 'economics and 'environment' in a way that relates and separates them. Notably, economics (which turns out to be capitalistic in the case of this study) "describes the systematic way in which humans interact with the environment in the production and reproduction of their lives." In the first place, in the statement above human interaction with environment is understood as aimed at the production and reproduction of lives, not wealth in the capitalistic sense. Secondly, the statement above is open to two interpretations; one, that the moment economic activities and the value system that informs them transgresses from the ideal (by causing environmental deterioration rather than reproducing lives), we are at liberty to judge them as simply anti-people.

However, this possibility is premised on understanding that the production and reproduction of lives is possible and sustainable when the environment itself is produced and reproduced, not killed. Secondly, 'production and reproduction' of life referred to could have been conceptualized in monetary terms; If this is true, the higher the accumulation of monetary benefits from the such economic activities, the more life is produced and reproduced. With this understating, life is either monetarized or understood in monetary terms. If these interpretations are true about the capitalistic economy and environment, most environmental problems have roots in economic enterprises of our times.

Capitalism as an economic system, is based on the private ownership of the means of production, built on use of less-paid or unpaid labor, through the production and distribution of services and commodities, with a goal of the maximization of profit. When he studied the internal dynamics of capitalism Marx, (1981 in Jim, n.d) realized that the system must either grow or die, since it is characteristic of "constantly expanding market for its products and chases the bourgeoisie over the entire surface of the globe." Byan (2008) explains that, historically this chasing, stretch out and settling has included the search for raw materials and new markets in the process of expansion.

This maximization of profit means finding the cheapest sources, using the cheapest labor, and minimizing costs such as waste disposal and pollution. The expansion of the market takes place extensively, by pulling new geographic regions into the market; and intensively, by commodifying or privatizing previously non-market activities and actively promoting an increase in personal consumption through the manufacture of desires where technology is constantly developing (Francis, 2015 and Byan, 2008).

Francis (2015) observes that human economic activities have resulted into pollution more so through combustion of fossil fuels that affects everyone, and extensive use of environmental elements, such as forest and lake products as raw materials. Transport and industrialisation, are known for producing or using fumes and substances which contribute to the acidification of air, soil and water and the increased concentration of greenhouse gases in the atmosphere especially in Europe as also emphasized by Dolman, Verhagen and Rovers (2003).

Additionally, in reference to writings of Pope Paul VI, Pope Francis (2015:2) reminds us that "due to an ill-considered exploitation of nature, humanity runs the risk of destroying it and becoming in turn a victim of this degradation." He shows that fertilizers, insecticides, fungicides, herbicides and chemicals used agriculture have certainly degraded the environment in several ways.

Industrial waste and chemical products utilized in cities and agricultural areas have led to bio-accumulation in the organisms. At this, Brooks (2006) and Robertson (2008) observe that industries (both in the developing and developed world) dump wastes; liquid and solid, treated or untreated, into water bodies (lakes, rivers, streams and swamps) whose water is used for industrial and domestic purposes, creating threat to all lives in the environment.

Rhelt, (2012) observed that, deforestation has led to environmental degradation and regrettable losses worldwide. It is clear that depletion of natural forests is an attempt to accumulate wealth from the forest products. Commercial agriculture, industrialization and other commercial purposes have led to loss of soil through erosion and loss of biodiversity. For instance, 860 million tons of valuable top soils are lost in Costa Rica and the Red Island in Madagascar 400 tons per hectare, in Ivory Coast 138 per hectare annually due to erosions caused by deforestation. Similarly, wetlands are being converted into commercial land leading to loss of the enormous biodiversity which they formerly hosted Rhelt, (2012).

Similarly, Francis (2015:15) notes that the foreign debt which was accumulated some years ago has inevitably contributed to environmental degradation in the developing economies. The "foreign debt" seems like an "ecological debt", through which the developed world controls the developing countries in

different ways. For example, "the export of raw materials to satisfy markets in the industrialized north has caused harm locally, as for example, the mercury pollution in gold mining and Sulphur dioxide pollution in copper mining" which exist in countries like Ghana, Democratic Republic Congo, to mention but a few, and degraded the environment.

Goldsmith. and Mander, (2003), Sullivan (2011) Magdoff, (2015) agree with Francis(2015) when they maintain that the first world after completing their activities, they leave great environmental liabilities or impacts such as the depletion of natural reserves, deforestation, open pits, polluted water bodies and soils due to poor waste disposals. These impacts are as a result of the exploitative search for money (capitalism) at the expense of the environment.

At the regional level, there has also been widespread degradation of the environment under the guise of accumulating wealth mainly a few individuals according (Rhelt, 2012). For example, the former richly bio-diverse Congo basins, important for the entire earth and for the future of humanity are burned down or leveled for purposes of commercial cultivation, leading to loss of countless species. And, the area is frequently becoming an arid wasteland (Rhelt, 2012). The World Bank (2013) reports that forests and woodlands are immensely important to the ecology, affect climate, sequestering carbon, preserving rainwater, supporting biodiversity and providing important renewable resources. However, they are being plundered because of short-sighted approaches to the economy, commerce and production.

In Uganda, the important habitants for both plants and animals have been reported destroyed due to the demand for recreation centers, settlements, and commercial agriculture, industrial space, parks among others, especially by rich or the middle class. Namanve Central Forest Reserve was sacrificed for



industrial operations by mostly foreign companies - coca cola in the leading sit. Destruction of many forests, including part Mabira forest by a sugar cane company and Bugula forest in Kalangala district by Bidco Oil Company as is discussed by Mugabe (2008).

The destruction in Uganda's natural environment and forests in particular is widely reported (Magala, 2014; Kelly, 2009; IRIN, 2009). By 1990, Uganda had more than five million hectares of forest cover but by 2005 only 3.5 million hectares remained. In fifteen years alone, the country lost 1.5 million hectares of forest cover. Up to now, this worrying vegetation loss is still blamed on rapid urbanization and human population increase, yet China, with the highest population on earth still has forests. It was predicated then that if deforestation continues at that rate, Uganda will have lost all its natural forest cover by 2050 (Physec.org, 2009).

In Buwunga Sub County, due to various human economic enterprises, swamps like Nabajuzi and forests Nabukonge, Wabitembe, and Kalukompwa, among others have been either fully or partially degraded for establishment of commercial farms and settlements. With the current trends of degradation, environmental organisation like National Environmental Management Authority through various strategies, are trying to enforce environmental conservation and restoration in already degraded areas says Wakabi (2012). However, the effectiveness of these policies and strategies is doubted, since financial gains still dictate people's interests.

Pope Francis (2015:14) cautions us that "the human environment and the natural environment deteriorate together". Therefore, "cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation". And, "the deterioration of the environment and of society affects the most vulnerable people on the planet".

### **1.3 Statement of the problem**

Than ever before, the natural environment is the most threatened in our time. Currently various international and national protocols, summits, policy responses and huge amounts of money have been put in place to alleviate the destruction of the environment, without reflecting on the primary cause of the problem. It should be noted that the relentless desire of the rich to accumulate wealth, who are equally influential, together with the struggle for the survival by the rural poor are responsible for the problem of environmental degradation to the current degree. This research therefore seeks to study the financial motivation behind environmental degradation in Buwunga Sub-county, Masaka district. This study is important to widen the discussions about the causes of environmental degradation and how it can best be addressed.

### **1.4 Objectives of the study**

#### **1.4.1 General objectives**

The general objective of the research is to explore the financial motivation behind environmental degradation in Masaka District, Buwunga Sub-county.

#### **1.4.2 Specific objectives**

1. To identify commercial activities responsible for environmental degradation
2. To find out the effects of commercial activities on the environment.
3. To come up with strategies that can reduce environmental degradation.

## **1.5 Research questions**

### **Major question**

What is the financial motivation behind environmental degradation?

### **Specific questions**

1. What are the commercial activities responsible for environmental degradation?
2. What are the effects of the commercial activities on the environment?
3. Which strategies can reduce environmental degradation?

## **1.6 Scope of the study**

The scope of the study addressed the geographical scope, the time scope and the content scope.

### **1.6.1 Content scope**

The study focused on the financial motivation behind the environmental degradation in Buwunga sub-county, Masaka district. The study mainly looks at independent variables as human activities responsible for environmental degradation which include: commercial agriculture, commercial construction and industrialization, dependent variable constitutes indicators of environmental degradation which may include; deforestation, loss of biodiversity (flora and fauna), soil erosion and pollution. Intervening variable are the strategies to reduce environmental degradation and they are, community based conservation, penalties strict laws and sensitization.

### **1.6.2 Geographical scope**

The study was carried out in Buwunga Sub-county, Masaka District. Masaka District is situated about 50kms away from

the equator towards the south and lies between 0-25 degrees south and 34 degrees east, having an average altitude of 115m above the sea level. Buwunga Sub County consists of eight parishes which are: Ggulama, Kamwozi, Kaanywa, Kasaka, Kitengeesa, Mazinga, Bulando and Buwunga parishes. People in this area mainly engage in agriculture both commercial and subsistence agriculture, trading welding, brick laying among others

### **1.6.3 Time scope**

The study is of specific interest in the period of 2004- 2014 because this period witnessed the greatest environmental degradation, especially forest and swamp degradation for commercial agriculture and construction among others in Buwunga sub-county and Masaka District as a whole.

### **1.7 Significance of the study**

Oso, et al., (2008) defines significance of study as the relevance of study in terms of academic contribution and practical use that might be made of the findings, thus it is hoped that this research will make contributions in the areas elaborated below.

The study will provide an understanding on how detrimental capitalism is to the environment, since the owners of the means of production use it unsustainably that is they only seek to gain profits without considering how their operations negatively affect the environment and the life that dwells in there. This in a way will provide insights and encouragement to people in this area and in Uganda at large to resort to value the environment, intrinsically rather than instrumentally thus making their activities less harmful to life that dwells in the environment.

The study will motivate other researchers to carry out similar investigations in other parts of the country where this kind of research has not been carried out (since the environment has suffered degradation in Uganda as a whole).

The study will also reveal information which will inform policy makers and environmental organization like NEMA to sensitize the general population to minimize activities that degrade the environment and also to make sure the environment is not destroyed by a few individuals who selfishly degrade the environment for profit making.

The study will also act as a basis and source of data to academicians and other people who desire to establish or analyze the link between capitalism and environment and the financial motivation behind environmental degradation.

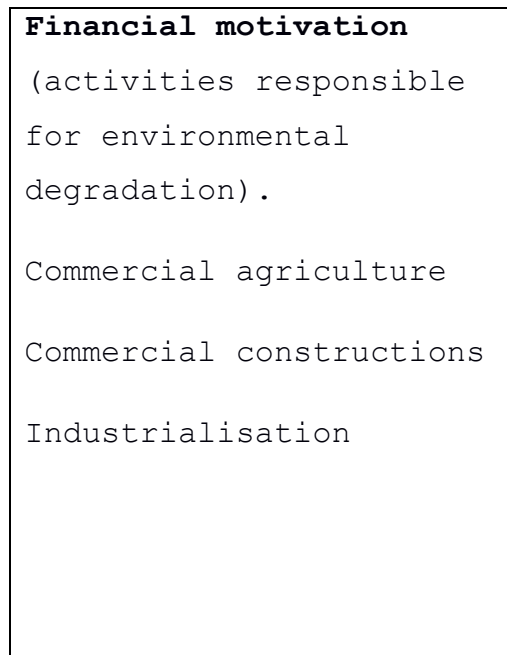
#### **1.8 Justification of the study**

The research was carried out following the severe impact of economic activities on the environment which is as a result of capitalism which drives the world that result into environmental degradation. Due to the capitalistic system, the environment is being used without any sense of sustainability.

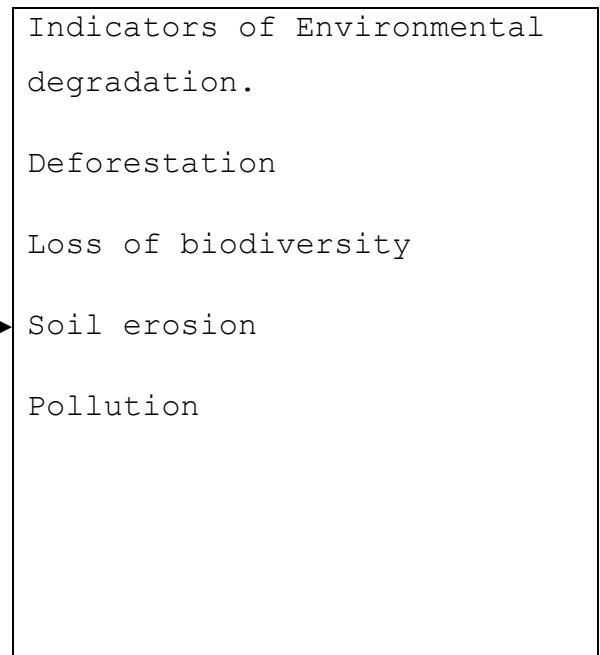
The research was also carried out for an award of Bachelors Degree of Ethics and Development Studies of Uganda Martyrs University.

## 1.9 Conceptual framework

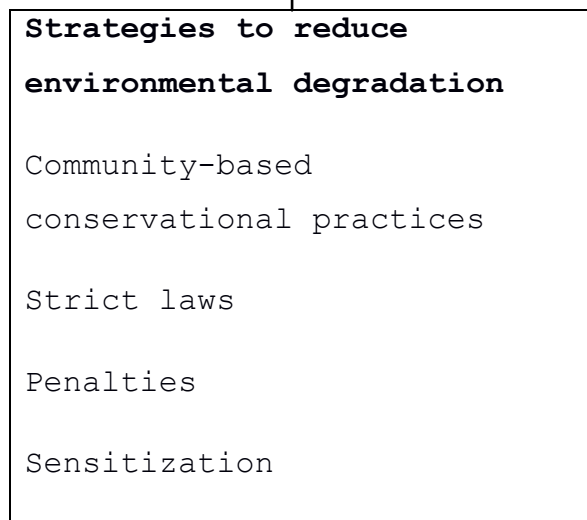
### Independent variable



### Dependent variables



### Intervening variables



The conceptual framework provides an explanation of the relationship between the three variables, which are; the independent, the dependent and intervening variables.

The independent variable (Financial motivation-income) is attained through carrying out different activities like commercial agriculture, industrialization and commercial construction that lead to environmental degradation. Commercial agriculture which leads to destruction of forests or swamps in addition to use of artificial fertilizers and that degrade the environment say through pollution.

The dependent variables presents effects of the commercial activities namely; soil erosion, loss of biodiversity, soil erosion, pollution and deforestation.

From the illustration, the intervening variable act as the control measures for both the dependent and interdependent variable. That's to say the control measures are recommendations to reduce environmental degradation which are; sensitization of masses, penalties, community based conservation and strict laws against environmental degradation.

#### **1.10 Definition of key terms and concepts**

##### **Environment:**

Cunningham, P.W. and Cunningham, M. A. (2008) define the circumstances or conditions that surround an organism or a group or organisms. This includes features like lakes, swamps, rivers, forests and the atmosphere among other.

##### **Capitalism:**

Capitalism is the economic system in which the investment in ownerships of the means of production, distribution and exchange of wealth is made and maintained chiefly by private individuals and corporations especially as contrasted to cooperatively or state-owned means of wealth with a goal of the maximization of profit, according to Spence and Leipziger (2010)

## **Paradox**

A paradox is a statement or proposition that seems self-contradictory or absurd but in reality expresses a possible truth Magdoff (2015).

## **Environmental degradation**

According to Wim (2009), environmental degradation refers to the deterioration in the environment quality from ambient concentrations of pollutants and other activities and processes such as improper land use.

## **Financial motivation**

Financial motivation refers to the monetary benefit obtained from consuming something which encourages the behavior which otherwise would not have taken place. This motivates actions which otherwise would not occur without monetary benefit Sullivan (2011).

## **Conclusion**

Chapter one has provided the introduction, background of the study, definition of key terms, statement of the problem, objectives of the study, research questions, scope of the study, significance of the study, justification of the study, conceptual framework and finally the conclusion



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discusses the opinions and discussions by different authors. Books, magazines, websites and other sources of information are used in this chapter. The researcher takes a critical look at the existing related literature that is significant to the study. It presents information under three themes, formed from the objectives of the study. These themes are; identifying commercial activities responsible for environmental degradation (commercial agriculture, commercial constructions and industrialisation), the effects of commercial activities on the environment (deforestation, soil erosion, pollution and biodiversity) and strategies that can reduce environmental degradation (community based conservation, penalties, strict laws and sensitization).

#### **2.2 Commercial Activities that Lead to Environmental Degradation**

The desire to accumulation wealth, dictates the conversion of natural resources into money, as it is evident in different economic activities. This is responsible for massive production which leads to degradation of the environment through pollution (land, water and air), overexploitation or depletion of resources, soil erosion and loss of biodiversity. Such activities include commercial agriculture, commercial construction and industrialization. These activities as already observed, lead to environmental degradation yet all lives (animal, plant and human lives) need a health environment for survival and wellbeing.

## **Commercial agriculture**

A study carried out by Ricade et al., (2014) reveals that commercial agriculture encourages use of artificial fertilizers (which contain components like nitrogen, potassium, sulfur, calcium and magnesium), which affect the quality of the soil, water and air. It is further observed that over 50% of people globally feed crops on synthetic fertilizers. The chemicals in the fertilizers, enter the water through leaching (the downward movement of a substance through the soil by the help of water), in addition to being dissolved into the surface water which recharges the underground water.

According to Mugabe, (2008) most commercial agricultural sites are established near swamps, lakes and rivers resulting into easy transportation of chemicals into these water bodies. A case in point is the Kakira sugar factory in Jinja district whose sugar cane plantations are surrounded by some parts of Lake Victoria and a swamp. The factory uses fertilizers in order to attain high yield of sugar canes which later fetches a lot of profits to the company. This inevitably affects the aquatic life in the swamp and the lake since the substances become toxic, leading to excessive growth of algae and decreasing the level of oxygen, which culminates into death of fish, and other aquatic flora and fauna. This creates an imbalance in the food chain in a long run as different kinds of fish turn into the main source of food for other animals and birds in the environment thus the increased the rate of biodiversity loss and environmental degradation at large as put by Satterthwaite, Reid and Bass (2014).

Furthermore, commercial agriculture contributes to climates changes across the globe. This is due to the fact that fertilizers contain chemicals like methane, carbon dioxide, ammonia, and nitrogen whose emission has contributed to a large extent in quantity of greenhouse gasses in the

environment. This leads to global warming and climate changes which have a negative effect on life in the environment, observes Environment. Co (2015). Similarly, nitrous oxide which is a by-product of nitrogen- also found in fertilizers is the third most significant greenhouse gas after, carbon and methane, thus the fact that artificial fertilizers used by commercial agriculturalists have great negative impacts on the environment which degrades it according to Barungi, (1999). Due to the desire to accumulate more and more profits by commercial agriculturalists, there will be continuous use of artificial fertilizers in bid to produce more even after being aware of their negative impacts.

Hilderman (2010) notices that, deforestation which caused by the trend of converting forests into land for commercial agriculture has contributed to environmental degradation. He goes ahead to report that in 1750 cropland occupied about 6-7% globally but as the capitalistic idea of accumulation of more and more wealth was ushered, more land was lost to agricultural activities thus by 1990, the land for commercial agriculture rose to 35-39% and by 2010, over 9 million hectares was lost to general agricultural use mainly by deforestation and UNEP (2015) estimated that by 2050 forested land will be majorly targeted. Deforestation affects the climate by increasing the atmospheric levels of carbon dioxide since trees that initially stored high levels of organic carbon is release into the atmosphere where forests are cleared. This further declines photosynthetic activities which result into the atmosphere to retain higher levels of carbon dioxide, soil degradation and also extinction of some plant and animal species which formerly lived in the forests.

However, some governments promote deforestation in some way. In Uganda for example, the government was proposing to give way Mabira forest (in fact part of it has been lost) to

investors for sugar cane growing for revenue to the government yet Mabira forest is of great importance in retaining the ecosystem of the country says Nature Uganda(n.d). Environmental degradation in this case is done in the name of gaining incomes and maximizing profits, an idea forwarded by the capitalistic world view.

According to Butler (2012) and Allianz (2015), deforestation cause wide loss of biodiversity. Butler gives the example of the Amazon forest (Brazil) that was cleared by use slash-and burn-techniques whereby crops like rice, citrus fruits, palm oil, cocoa, coffee, tea, soya beans, rubber and banana are grown mainly for export purposes. Palm oil plantations for instance are not suitable for wildlife therefore endangered species like orangutan, the pygmy elephant of Bornea and Sumatran tiger are all threatened by the development of palm oil in parts of Indonesia, Malaysia and New Guinea. Also in Ivory Coast the export- oriented pineapple production poses a great threat to the environment.

Uganda is not exceptional from such a trend of deforestation for commercial agricultural purposes because The New vision, (2009) reports that the government signed 7,000 hectares of Bugula forest in Kalangala district with the BIDCO company for growing palm oil trees in exchange of 10% of the share in the company and this has consequently resulted into great loss of biodiversity since palm oil plantation support very low levels of biodiversity which implies that most of the plants and the animals like monkeys, antelopes and birds which were found where the newly established palm oil plantation is either move or perish. Also in Buvunga Sub County, the high rates of deforestation are attributed to commercial agriculture where people grow sugar canes to be used on sugarcane jagarries (which also require a lot of firewood), passion fruits, pineapples (which encourages total deforestation) among other

plantations. The above examples are evidences of how commercial agriculture degrades the environment in its various forms.

### **Industrialization**

Industrialization as a commercial activity aimed at accumulating income and maximization of profits by the owners of the means of production. And, leads to environmental degradation especially when there is improper disposal of industrial wastes and indiscriminate take-up raw material says Nwadinigwe (2013). The industrial wastes include solid, liquid and gaseous wastes which have the potentiality of polluting the environment. Poor management of the industrial waste also contaminates the soil, air, and water which threatens the existences of numerous species of plants and animals in the ecosystem.

Lone (2013) confirms that various pollutant heavy metals like Cytotoxic, Mutagenic, Carcinogenic, Cadmium, Copper, Mercury Lead, Arsenic, Zinc, Nickel and Vanadium have possible injurious effects on animal and plants. However, most industries lack proper waste management systems and treating it is considered to be expensive and likely to reduce the profits of the companies therefore disposing off the industrial wastes in water bodies or open areas is a cheap option according to the companies. For example, in Kenya the Dominion Farm Limited, a paper factory near Yala swamp, channels the effluents from the factory to this swamp which feed the local population and other biodiversity in this area, reveals Marita (2011). Likewise, in Uganda companies such as the Nile breweries dump their waste (both bio-degradable and non-biodegradable) in the river Nile leading to the deterioration ecological state of the habitats. Hence the biodiversity survival which formerly depended on these no

longer does because of its current poor state as explained by Bachofen (2015).

No matter how much companies' activities have affected the environment where they operate, they continue with the activities in order to generate incomes and maximize profits with little or no caution from the governments. This confirms the fact that capitalism has greatly accelerated environmental degradation.

Namateefu and Mugabe (2012) say that there has been uncontrolled and unplanned industrialization worldwide which necessitates mining and use of fossil fuel such as petroleum, hydrocarbons and coal produce large quantities of oxides of carbon, nitrogen and sulphur as well as methane and aerosol particulates that destroy the atmospheric ozone layer that shield and protects organisms from high levels of ultra violet radiation resulting in global warming and climate change, World Water (2013) also reveals. The industrial activities during which the fossil fuels are used include, processing (processing of industrial products) and transportation of raw materials and finished goods during which the fuels are burnt thus leading to air pollutions.

Allen (n.d) also agrees with Namateefu and Mugabe (2012) when she argues that the production, processing and use of fossil fuels have profound impacts on the environment and natural resources, including water because water is used in so many ways during fossil-fuel extraction and processing. According to her, the nearby water bodies and groundwater become contaminated by solid or liquid wastes created by the extraction process. The water brought to the surface through mining or drilling, contains dissolved salts, trace metals, hydrocarbons, and radio nuclides according to (USGS 2010) and this have devastating effects on the biodiversity which also include their death.

According to the Union of Concerned Scientist (n.d) the ecological impact of industrialization is evident where many aspects of fossil-fuel production directly affect aquatic resources and can cause mortality events or degrade ecological resilience. At the global level, there is a clear link between fossil-fuel combustion and climate change which means that the ecological impacts of climate change can be largely attributed to fossil fuels. Impacts include changes such as increased temperature, carbon dioxide concentrations, habitat loss, and decreased oxygen concentrations. These in turn affect primary production, species composition, and food webs and also likely to increase the risk of extinctions from freshwater ecosystems this in a way leads to environmental degradation due to increased loss of biodiversity (Fischlin et al. 2007) clarify.

### **Commercial constructions**

The capitalistic system necessitates construction of roads and bridges which are frequently constructed across wetlands since wetlands are considered to have low value and "cost effective". Roads disrupt the continuity, driving out more sensitive, interior species and providing habitat to non-native species. The maintenance and use of roads results into too many chemicals into the surrounding wetlands since substances like rock salt used in deicing the roads which can damage or kill vegetation and aquatic life in the surrounding. Relating to the above, herbicides, soil stabilizers and dust palliatives used along roadways damage wetland plants and the chemicals may concentrate in aquatic life or cause their mortality. In addition, roads and bridges are used to transport industrial material, agricultural produces especially when the factor of demand and supply come into play. When the transport means are improved, more economic activities also boom like industrial and agricultural activities emerge the more and these have a negative impact on the environment Kyakula, (2014) explains.

Albert, (2015) observes that, there are so many of huge, shopping arcades, Business centers, hotels, resorts, schools, hospitals, and markets that have replaced either forests or swamps. Such constructions are for companies or private owners and they operate on a capitalistic view aimed at maximizing profits using the available factors of production. However, there activities lead to environmental degradation through pollution mainly due to poor waste management. In addition, a forest like Namanve Central Forest Reserve was sacrificed for the construction of coca-cola company. Such destruction negatively impacts on the environment given that forests serve different purposes filtering water, control water runoff, protect soil, regulate climate, cycle and store nutrients, and provide habitat for countless animal species, according to Mugabe (2008) and Lester (2012).

## **2.2 Effects of Commercial Activities on the Natural Environment**

### **Loss of Biodiversity**

European Environment Agency, (2015) defines biodiversity, as the variety of life in the environment. It plays a key role in the functioning of ecosystems and the provision of ecosystem services which are essential for human life and well-being. These include provisioning services (like fisheries, biomass), regulating and maintenance services (for example pollination, nutrient cycling, and water purification). However, despite biodiversity's intrinsic value and its fundamental importance for humans and the environment at large, biodiversity is highly threatened by human activities like intensification of commercial agriculture and infrastructural development. The key threats to biodiversity loss include habitat loss, fragmentation and degradation of natural habitats. The increasing impacts from climate change also affect



species' distribution, range and interaction and are projected to continue threatening biodiversity in decades to come.

Like in any other area, Europe's common bird populations have declined by 12% since 1990 and some biodiversity-rich areas, such as grasslands and wetlands, are also still declining as artificial areas like industrial zones, housing developments, transport infrastructure have increased by nearly 8% since 1990. Many African countries for example the Democratic Republic of Congo, Uganda, Kenya, South Sudan, Nigeria among others lose their plant and animal diversity due to deforestation for commercial agriculture, commercial construction and industrialisation as explained by Cunningham, P.W and Cunningham, M.A. (2008). Thus the search for money has greatly contributed to the loss of biodiversity and environmental degradation at large.

Netondo et al., (2010) explain that biodiversity loss can be attributed to chemical or thermal pollution. Species in habitats are increasingly being harmed by industrial activities and pollution from excessive use of agrochemicals such as DDT, oil spills, acid precipitation among others thus globally, over 4,000 assessed plant and animal species are threatened by agricultural intensification. Agriculture leads to conversion of forests and wetlands into agricultural land yet they are crucial for water retention (wetlands) and buffering both droughts and floods.

### **Soil erosion**

Soil erosion is also another evidence of environmental degradation and deforestation is one of the major factors responsible for soil erosion. According to The World Bank (2013), removal of forest cover which function as a binder of the top layer of the soil with increasing land demand for commercial activities meant for wealth creation have resulted

in soil erosion. When natural vegetation is cleared, farmland ploughed, the topsoil is exposed and often blown away by wind or washed away by rain. Soil erosion due to soya production, for example, sees Brazil lose 55 million tons of topsoil every year. The eroded soil clogs streams, rivers, lakes, and reservoirs, resulting in increased flooding, decreased reservoir capacity, and destruction of habitats for many species of fish and other aquatic life. In Uganda due to the high rates of deforestation rates of soil erosion are also high and this leads to environmental degradation as observed by Wakabi (2012).

However, the long-term loss of farmland productivity and damage to the environment from eroded sediments often are overlooked in the need for short-term economic gains.

### **Pollution**

Pope Francis in *Laudato si* (2015) observes that human economic activities have resulted into pollution more so through combustion of fossil fuels that degrades the environment. Industrial activities for instance leads to production or use fumes and substances which contribute to the acidification of air, soil and water and the increased concentration of greenhouse gases in the atmosphere especially in Europe. Additionally, each year hundreds of millions of tons of waste are generated, much of it non-biodegradable, highly toxic and radioactive, from businesses, from construction and demolition sites, from clinical, electronic and industrial sources. This affects the quality of the environment and all the elements that live in the environment thus affecting its wellbeing in one way or the other.

Trautmann, Wagenet and Porter (2012) observe that, fertilizer nutrients are lost from agricultural fields through runoff, drainage, or attachment to eroded soil particles leads to soil

pollution. Also commercial agriculture leads to water pollution, for when chemicals are carried with eroded soils into surface water bodies it leads to excessive growth of aquatic plants. The persistent use of chemicals and fertilizers in commercial agriculture is dangerous because pesticides generally kill not only the pest of concern, but also a wide range of other organisms, including beneficial insects and other pest predators.

### **Deforestation**

The fact that capitalism has further environmental degradation cannot be denied. Many forests worldwide have been lost for commercial agriculture, constructions and so on. Kenya, Cameroon, Nigeria, Ivory coast, Brazil among countries have lost forests other due to production of commercial crops like rice, palm oil, pineapple citrus fruits, sugar cane, coffee to mention but few. Allianz (2015) reveals. Jervis, B and Bruxvoort E (n.d) say the capitalistic nature of the global economy, global trade and the market forces which influence commodities to be produced for export has led to increased rates of deforestation. Therefore, forests are cleared in order to establish farms that can provide exports an point in case are most of the forests in Buwunga which were cleared for production of pineapple, passion fruit, and sugar canes, among others for export purposes.

According to FAO (2009) the greatest overall loss is occurring in Latin America and the Caribbean, followed closely by in Africa. Various countries are experiencing high rates of environmental deforestation which has increased the amount of green house gasses resulting into global warming and this affects all the lives that dwell in the environment as a result of general climate change. Indonesia which is said to have the fastest deforestation rates in the world is also considered as the world's third emitter of greenhouse gases,

according to World Bank (2010) report. However, given the various effects of deforestation individuals continue to carry out commercial activities like commercial agriculture, commercial construction and industrialisation which encourage general environmental degradation.

### **2.3 Strategies to overcome the influence of financial motivation on environmental degradation**

Due to the great negative effects imposed on the environment in bid to search for wealth through various activities, something has to be done to reduce or reverse the impacts of these which affect all the elements of the environment. Below are the suggested ways that can reduce the negative impacts of the activities.

#### **Penalties**

There should be penalties given to those who degrade the environment in various ways like pollution (waste disposal) and deforestation among others. In Australia for instance, it is an offence to carelessly dispose waste in a manner that harms or is likely to harm the environment without lawful authority. The maximum penalty is \$1 million for a corporation and \$250000 and/or 7 years' imprisonment for a person. In the case of air and water pollution, the maximum penalties are \$125000 and a maximum penalty of \$60000 per day for a continuing offence in the case of a corporation; and \$60000 and \$30000 per day for a continuing offence in the case of a person. If such penalties are extended and implemented globally the owners of the means of production (like industries, factory and business owners would minimize the negative effects on their businesses to the environment). Uganda Legal Information Institute (2010) and Norberry (n.d) suggest.

## **Community-based Conservation**

There should be re-introduction/ revival, introduction and implementation of community-based conservation methods that seek to achieve both sustainable use of natural resources and their home-grown conservation. In this way, communities can ensure that local resources like forest, swamps, water bodies and other valuable natural resources are not exploited (over exploited) by a few members of the community or even investors at the expense of others, yet ideally resources should to benefit the whole community (Barrow, et al., 2000). Through the collaborative natural resource management practice, people are able to report illegal activities to the local forestry officer.

Community based conservation seeks to achieve both sustainable use of natural resources and adequate conservation practices through devolving control over resources to local communities. In Uganda the establishment of Local Council system has been contributing to this type of community based conservation activities. Inclusion of provision for granting user rights and the establishment of community management areas as a category of conservation area has created both the climate and legal structure for community based conservation. According to the International Tree Foundation, (2016) Masaka District Land Care Chapter (MADLACC) which is a multidisciplinary community based organization since its birth in 2009 has implemented activities in the community to address local challenges through local solutions. Activities like tree planting, agro forestry, promotion of community seed production and bee keeping help communities to earn a living while enhancing environmental conservation and protection. Such this help to reduce environmental degradation in one way or the other.

## **Strict Laws**

As underlined by Tindifa (2001), several policies and statutes have been developed such as the National Environment Statute (MLWE 1995) The National Wetland policy, the Environmental Impact Assessment Resolution, the National Land use Policy and the National Land Policy. But despite the existence of policies and the implementing organs resources are continuously being encroached upon and are being depleted at an alarming rate. Even the constitution of Uganda Article 245 states that, "parliament shall by law, provide for measures and intended to: Protect and preserve the environment from abuse, pollution and degradation, Manage the Environment for sustainable development and Promote environmental awareness". Therefore the article stipulates that the utilization of natural resources shall be managed in such a way as to meet development and environmental needs of the present and the future generation and in particular the state shall take all possible measures to prevent or minimize damage and destruction to land, air, and water resources resulting from pollution or other causes.

Although the laws are in place, the implementation is ineffective due to the scarcity of funding and low budgetary allocations from both the central government and local government. Therefore the government should make sure the laws are enforced are law breakers punished which will reduce the rates of environmental degradation.

According to University of Nairobi, (2008) the Kenya NEMA, along with other agencies like the Kenya Wildlife Service, Kenya Parks Service and the Water Regulation Management Authority, need legislative tools to adequately protect and conserve the environment of Kenya, ensuring a clean and healthy environment for all biodiversity and citizens as well. NEMA is also charged with enforcing Environmental Management

and Coordination Act's provisions as well as the subsidiary legislation. The subsidiary legislation includes water quality, waste management, controlled substances, biodiversity, wetland, river and seashore, and environmental impact assessment (EIA) regulations. Opondo (2012) reports that the Kenyan NEMA has not been to fully implement the laws as stipulated and therefore the government of Kenya and other governments if enforce the laws strictly the rates of environmental degradation will reduce.

### **Sensitization**

Continued environmental degradation in Uganda like in most parts of the world remains a big threat to lives in the environment. This calls for sensitization for all potential environment degraders like commercial agriculturalists, commercial constructors and the general population. This can be done through churches, community radios, community meeting, social media, and billboards among others. Open hands to serve Organization (2015) revealed that sensitization the youths and women can play key role in environmental conservation. These groups are empowered to establish projects initiatives like Bee-keeping, art and crafts from which they can earn an income without causing environmental degradation.

In addition, through sensitization various people can get knowledge about environment conservation, the impacts of environmental degradation among others. In a way, this can help to re-plant the already destroyed natural resources and also to reduce the rate of degradation which will increase the potential for people to access their livelihoods.

### **Conclusion**

The existing literature has provided us with the facts about how capitalism has influenced environmental degradation world over. This is through various economic activities carried out

by owners of means of production with less responsibility thus causing environmental degradation. Economic activities like commercial agriculture, industrialisation and commercial construction have consequently resulted into massive deforestation, loss of biodiversity, pollution and soil erosion. From literature we also realize that globally, regionally and locally there have been efforts by the governments and numerous organizations to reduce the rate of environmental degradation through funds, sensitization and publications which reveal how human activities have greatly led to the deterioration of the environment. However little or no action has been changed by the owners of means of production since there is still more rates of environmental degradation say pollution (poor waste management methods), massive deforestation and conversion of swamps into commercial purposes.

The laws put in place by the government are also not enforced and implemented as they would be which has furthered environmental degradation in all its forms. Therefore governments through their different environmental authorities should make sure that laws are enforced to save the environment from the rapid deterioration it is currently. Other measures like community based conservation practice and penalties should also be given attention such that people can use the environment sustainably. It is upon these grounds that the research designed a methodology to carryout research in Buwunga Sub County, Masaka get the opinions and views of the local population (those engaging in commercial agriculture, constructions and industrial activities), environmental officials and Local Council leaders.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter provides a presentation of the methodology that was used in the study in order to achieve the objectives of the study. It highlights the research design, area of study, the population and the sample size of the study and sampling techniques, the data collection methods and instruments, control methods, research ethics, data analysis, limitations and finally a conclusion.

#### **3.2 Research Design**

The researcher used a case-study design where one case was selected for a detailed study, in order to explore and understand how unique it is. According to Wangusa (2007) a case study design is advantageous because it allows in-depths analysis of the problem being studied. In this study, the researcher used a case of Buwunga Sub-County, Masaka District in order to study the paradox of capitalism and the environmental wellbeing but particularly the financial motivation behind environmental degradation.

The research was carried out by the use of both qualitative and quantitative methods. Since qualitative research is not numerically measurable, the information got from respondents such as commercial agriculturalists, commercial constructors, environmental officials and local council leaders was gathered by use interview guides, to obtain firsthand information. Quantitative research was concerned with the collection of data obtained by use of questionnaires that is to say data in a numeric form. Both qualitative and quantitative research approaches were employed because they complement each other hence maximizing the strengths and minimizing the weaknesses

of each other. Both were used also to cater for readers who preferred either method for easy interpretation of the data.

### **3.3 Area of Study**

The study was carried out in Buwunga Sub-county in Masaka District. Masaka district is situated about 50km away from the equator towards the south and lies between 0- 25 degrees south and 34 degrees east, having an average altitude of 115m above the sea level. Buwunga Sub County consists of eight parishes which are: Ggulama, Kamwozi, Kaanywa, Kasaka, Kitengeesa, Mazinga, Bulando and Buwunga parishes.

The area is characterized by natural physical features like forests, swamps, swampy forests and hills with gentle slopes separated from flat broad plains. The vegetation consists of short grass on the hills with scattered trees on the slopes, tending to become thicker at the bases of the hills. Most valleys have forests with a variety of species coupled with shrubs and swampy vegetation where water flows normally during the rainy season and provides a good source of permanent site for wells.

Most of the people's livelihood and incomes are dependent on natural resources like swamps, forests and soils which have led to the increasing rates of environmental degradation in the area.

### **3.4 Population of the study**

The categories which were relevant to the research included commercial agriculturalists, commercial constructors, local council leaders and environmental officials. The commercial agriculturalists, constructors were chosen because the main aim of their activities is accumulate income and they have a negative impact on the environment. Environmental officials were chosen because they play a role in policy implementation regarding environmental protection and local

council leaders were chosen because they have great knowledge of what is happening in their area and are supposed to collaborate with environmental officials to implement various laws regarding environment.

### 3.5 Sampling size and Sample techniques

According to Bloor and Wood (2006) sampling is the selection of cases from a wider population stating the units of a sample which may be individuals, institutions and communities. For all the respondents: commercial agriculturalists, commercial constructors, environmental officials and local council leaders, the researcher used purposive sampling. Wangusa (2007) says that purposive sampling is the selection of cases on the basis of the researcher's judgment about which will be more useful. The researcher selected this technique because it helped the researcher to get information from these informants.

The table below shows the population of study, the sampling techniques, sample size, data collection methods and data collection tools / instruments.

**Table 1: Population, sampling techniques, sample size and data collection tools/ instruments**

<b>Population</b>	<b>Sampling Techniques</b>	<b>Sample size</b>	<b>Data collection method</b>	<b>Data collection Tools/ instruments</b>
Commercial agriculturalists	Purposive sampling	20	Interview and questionnaire	Interview guide and questionnaire form
Commercial constructors	Purposive sampling	10	Interview	Interview guide
Local council Leaders	Purposive sampling	10	Interview	Interview guide
Environmental Officials	Purposive sampling	5	Questionnaire	Questionnaire form
<b>Total</b>		<b>45</b>		

The research comprised of a total number of 45 respondents. Farmers who carry out commercial agriculture were 20, 10 commercial constructors, 5 environmental officials and 10 local council leaders. Data was obtained from commercial agriculturalist by use of both questionnaires and interview guides whereby the researcher used interviews to obtain data from 15 and interviews and 5 by use questionnaires, from environmental officials data was obtained by use of questionnaires, from commercial constructors and local council leaders, data was obtained using interviews

The researcher used purposive sampling because she knew that these people would provide the right information for the research. According to Nueman, (2007) purposive sampling is when participants are selected for their potential to yield rich information. Purposive sampling helped the researcher to get the required information she needed with ease.

### **3.6 Data collection methods**

Data collection methods refer to techniques used to collect data which answer the researcher's objectives and research questions. A method refers to the way the research is done and it requires an instrument for it to be successful. An instrument is a document used to guide the researcher when using a method Ochieng (2009).

#### **3.6.1 Primary Data Collection Methods and Instruments**

##### **3.6.1.1 Interviews and interview guides**

An Interview is conversation or interaction process between two or more people with a specific purpose, which focus on planned contents. It involves locating an authority on the subject being investigated and preparing adequately for an interview Wangusa (2007) explains. The researcher used the interviews which involved face-to-face exchange of ideas

between the researcher and the respondents that brought to clarity unclear questions to the respondents especially to those who could not express themselves in English. This was so Luganda was used to interview some respondents for instance some commercial agriculturalists commercial constructors and local council leaders did not know English. In addition, the researcher used an interview guide; it is a set of questions the researcher asks the respondent to get information. This instrument was favorable due to the fact that it generated extensive information about the questions asked.

#### **3.6.1.2 Questionnaire**

The researcher also used the questionnaire instrument. Linda et al (2008) define a questionnaire as a set of carefully designed questions given in exactly the same form to a group of people in order to collect data. It involves giving predetermined questions to be answered in writing, therefore used by respondents who know how to read and write. It was also used for the purpose of convenience that is to say so that people who do not have time for interviews during the day could answer them any time.

#### **3.6.2 Secondary Data Collection Methods**

According to Bloor and Wood (2006), secondary data collection methods are the methods which involve the critical analysis of documents and their contents in order to draw conclusions about the social circumstances in which the documents are produced and read. The researcher collected data from already written sources, from journals, books, reports, Newspapers, magazines and internet sources. This was helpful to the researcher to compare information from other authors.

### **3.7 Quality Control Method**

#### **Validity**

Bloor and Wood (2006) maintain that validity is the extent to which the research yields an accurate version of the world. In this study, Triangulation was used to ensure validity. Under this, the questionnaire method was used to cross-check findings got by use of interview method. Also interview method was used to cross-check findings obtained by use of Questionnaire method. Patton, (2002) says that triangulation is a combination of more than one data collection method in the study of the same phenomenon. As a method, it is used in qualitative research to cross-check multiple data sources and collection procedures to evaluate the extent to which all evidence converge. This was used to ensure validity of the research instruments used in answering the tested research objectives and questions.

#### **Reliability**

Reliability according to Linda, et al. (2008) is concerned with consistence. Research finding are considered reliable if similar findings are revealed time after time in repeated application of the same research. In this study, reliability was ensured through pretesting of the research tools to ensure that the results are consistent. In addition, the researcher made sure that, data from respondents was collected personally through a face-to-face dialogue so that firsthand information is obtained. The researcher kept separate records of data collected from each respondent and this ensured the data from different respondents is not mixed up.

### **3.8 Data analysis techniques**

The researcher collected all the data from the field, qualitative and quantitative approaches were employed to evaluate the information. The qualitative approach was used to analyze data in line with each specific objective by use of themes and words. This helped to show regularity with which the ideas presented were interpreted as a standard of importance emphasis and attention. The quantitative approach was used to analyze numerical data by use of tables.

### **3.9 Ethical considerations**

The researcher throughout the research followed the right procedures which included accurate methods of data collection, and analysis. She also acknowledged all the sources used to gather the information.

The researcher carried out the study after seeking consent from the respondents in addition to avoiding issues of bribery for any information given. She respected each and every respondent by not forcing anyone to fill questionnaires and to respond to any questions. Thus the respondents answer questions willingly.

The research respected also the respondent's right to anonymity. This implies that their contribution remained anonymous. Similarly, the right to confidentiality was not compromised that to say all the information given to her (the researcher) was not revealed to other people. She also did not write the respondents' name unless when accepted to do so and on top of informing the respondents about the purpose of the study.

### **3.10 Limitations of the study**

During the field research, the researcher faced a number of constraints which involve the following.

Some respondents were not available at time agreed upon because they had to first do some of their work. This made the researcher to lose time since she had to wait for the particular respondent who delayed for interviews. Other respondents returned questionnaires after so long which inconvenienced the researcher.

The researcher realised financial constraints because a lot of money was required for printing the questionnaire forms and the interview guides, buying stationary, transport and so on. It was a problem because the researcher was not financially stable.

The researcher faced a challenge of some respondents who were reluctant to answer some (commercial agriculturalists and constructors) questions thinking that they information would be given the government and therefore destroy their plantations and construction which were established near the swamps even after explaining to them that the purpose of the research was purely academic.

In order to give some information, some respondents asked for something in exchange. However, I explained to them that I was a student and I did not have money to give them, this was challenging. The researcher sought financial support from those who could help more so the brothers, mother and friends.

### **Conclusion**

This chapter included research designs, area of study, population of the study, sampling techniques and size, data collection methods, data collection instruments, quality control methods, data analysis techniques, ethical



consideration, which were of great importance in the field while collecting data. Interviews and questionnaires were used to obtain data. The data collected from the field will be analyzed and presented by use of tables and themes and words.

## CHAPTER FOUR

### DATA PRESENTATION, INTERPRETATION AND ANALYSIS

#### 4.1 Introduction

This chapter presents findings from the field which was carried out in Buwunga Sub-county. The respondents included commercial agriculturalists, commercial constructors, local council leaders and environmental officials. The researcher presented data using interviews guides while also adding that from questionnaires. The findings from the field are analyzed, interpreted and discussed according to the specific objectives of the study and they answer research questions as presented in chapter two. Since in the questions in questionnaires to environmental officials and commercial agriculturalists were different, data from these categories was also analyzed differently.

#### 4.2 Data presentation

##### 4.2.1 Background information of respondents

**Table 2: Sex of Environmental Official**

<b>Sex</b>	<b>Frequency</b>	<b>Percentage</b>
Male	4	80
Female	1	20
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Data**

The table above shows that 80% of the respondents (environmental officials) were male and 20% were female.

**Table 3: Sex of Commercial Agriculturalists**

<b>Sex</b>	<b>Frequency</b>	<b>Percentage</b>
Male	4	80
Female	1	20
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Data**

From the table above, 80% of the respondents were male and 20% were female.

**Table 4: Age of Environmental Officials**

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
25- 35	-	-
36-45	1	20
46-55	2	40
56-65	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Data**

The table of the age of environmental official indicates that 20% belong the age 36-45 years, 40% to 46- 55 years and also the other 40% to the age 56-65 years.

**Table 5: Age of Commercial Agriculturalists**

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
25-35	1	20
36-45	1	20
46-55	3	60
56-65	-	-
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Data**

From the table above, 20% of the respondents belong to the age bracket of 25-35, 20% also to 36-45 and 60% belong to the age bracket of 46-55.

**Table 6: Level of Education of Environmental Officials**

<b>Level of education</b>	<b>Frequency</b>	<b>Percentage</b>
Certificate	1	20
Diploma	3	60
Degree	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Data**

According to the table above, 20% of the environmental official had certificate, 60% diploma and 40% had degrees.

**Table 7: Level of Education of Commercial Agriculturalists**

<b>Level of education</b>	<b>Frequency</b>	<b>Percentage</b>
None	-	-
Primary	-	-
Secondary	3	60
Tertiary	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Data**

The above table reveals that 60% of commercial agriculturalists attained secondary education and 40% tertiary education.

### 4.3 Commercial activities responsible for environmental degradation

**Table 8: Commercial activities responsible for environmental degradation (Environmental Officials)**

<b>Commercial Activities</b>	<b>Frequency</b>	<b>Percentage</b>
Commercial Agriculture	4	80
Commercial Construction	1	2
Industrialization	-	-
<b>Total</b>	<b>5</b>	<b>100</b>

Through use of questionnaires, 80% of environmental officials pointed out that commercial agriculture is greatly responsible for environmental degradation in Buwunga Sub County. 20% of the environmental official said that commercial construction also as an activity responsible for environmental degradation. Some structures like schools, hospitals, business buildings have replaced forests.

**Table 9: Commercial activities responsible for environmental degradation (Commercial agriculturalists)**

<b>Commercial Activities</b>	<b>Frequency</b>	<b>Percentage</b>
Commercial Agriculture	5	100
Commercial Construction		
Industrialization		
<b>Total</b>	<b>5</b>	<b>100</b>

The table above shows that through questionnaires to commercial agriculturalists, 100% agrees commercial agriculture is responsible for environmental degradation.

The interviews with the local council leaders revealed that commercial agriculture is responsible for environmental degradation, more so deforestation because numerous forests have been cut to put up coffee, pineapple, and sugarcane plantations among others. This was confirmed by the local council leader of Kalugondo village who said that;

*"You see, Kalukompwa forest was formerly surrounded by the villages of Kalugondo, Buwanga, Lugazi and Kyera. We would get firewood, water, wild fruits, and bush meat which sustained the communities for so long. But the rich have cut it; the whole forest to plant pineapples, sugarcane, coffee, banana, and passion fruits which only benefit those people."*

Through interviews with commercial agriculturalists, the researcher noticed that most the agriculturalists established their plantations either replaced forest, swamps or swampy forests this is an indicator of environmental degradation. In addition, they said that they use artificial fertilizers as a way of increasing the yields meant for minimizing the cost of production and maximizing profits. The fertilizers mentioned include NPK, CAN, Urea, rapid grow, and super grow, among others. Also all of them said that they use pesticides like Dudaccelemectic, Round up, weed master, 2-4 D amine, Endocil, Rocket, and Sweep All are used on their farm. Both the artificial fertilizers and the pesticides used on commercial plantations have potentially degrading effect to the environment such as killing of living organism and altering of the Soil PH but they continuously use them because they lead to high yields which fetches them a lot of profit. One commercial agriculturalist (whose name withheld) from Kasaka said that;

*"I have three plantations of pineapple and to establish them I first cut a forest. Even where I grew passion fruits is a swamp because even in a dry season my passion fruits are not affected since I can easily irrigate them. I also use fertilizers like NPK, CAN, Urea rapid grow, super grow in all the plantations because that is when I can yield some high profits. Also use pesticides 2-4 D amine, Endocil, rocket, and sweep all especially before planting because, digging with hand hoes takes a lot of time and also hiring a tractor is expensive".*

Just like this one, many commercial agriculturalists established their plantations after some sort of degradation. This is either clearing a forest or encroaching on a swamp or a swampy forest. This is a sign that commercial agriculture is responsible for environmental degradation. The use of artificial fertilizers and pesticides is detrimental to the environment but more so aquatic life when carried out from the swamps.

From interviews with some respondents, it was noted that most of these forests were government forest reserves, even having forest rangers employed by the government to protect them from encroachers. With this one respondent (name withheld) said that;

*"We came to realize that these rangers were taking advantage of being in-charge, to harvest timber. They were targeting big trees, especially those with valuable timber, for instance Ngwabuzito and Mivule. Many people realized that they (forest rangers) were exploiting what they were forbidding others. In 1980s, people hardly cut forests, they would only go there for firewood; and these would be old and dry branches breaking from overgrown trees. By late 1990's people had begun sneaking into forests to burn charcoal or harvest timber. And, some people would either give money (bribes) to rangers to allow them into the forests for timber and charcoal or would agree to share the timber or charcoal with them if they allowed them into the forest.*

According to my research findings, it is clear is that greed for money on the part of those who are wealthy (including forest rangers, civil servants and leaders), and desperation

of the rural poor population (who sought to get money which would allow them to fit in the capitalistic economy), competed over maximizing the forest resources of for their individuated personal interest, at the expense of collective wellbeing.

It was found out that, "although, deforestation is widely blamed on poor people who are unemployed and desperate for survival, in Buwunga Sub-county, deforestation was mostly championed by leaders, civil servants, forest rangers. Even up to now, some of the formally forested lands are either owned or managed by former leaders of the sub-county and civil servants. Most of these forests are no more because their destruction financially benefited leaders"

Through interviews with owners or custodian of commercial constructions/buildings, they agreed that commercial constructions are partly responsible for environmental degradation in Buwunga Sub-County. A big number of owners of schools said that they caused some deforestation. This was confirmed by a co-founder of one the schools in the sub-county (name of school withheld) who said that;

*"There was a forest which we cut in order to build our school's main hall, dormitories and the staff quarters. We had to cut it because by that time we had a few schools in this Sub-County and many parents wanted to educate their children and this was really a viable business for us to venture into".*

In addition, the waste generated from such constructions is not properly managed. Because, as one of the owners of a school in Kitengeesa village revealed, their solid waste material was disposed-off into a nearby swamp. This can potentially lead to the environmental degradation. During an interview, when asked about the management of waste generated from the school, a school owner noted that;



*"The waste that decomposes is collected at the school's rubbish pit but that which cannot decompose like plastic material (old cups, plates basins and old clothes) we hire the truck and takes it to the swamp called Nabajuzi because taking it a collection point near Masaka town is more expensive".*

Some respondents said that industrialisation is not evident from actual structures of industries in this area but through industrial products in the area. According to a local council leader in Kamwozi parish, various individuals purchase industrial products but they lack proper measures for disposing them. They end up disposing them anyhow and anywhere which leads to environmental degradation. He was more critical to polythene bags and plastics which prevent soil aeration, thus affecting the quality of the soil and leading to environmental degradation at large.

#### 4.4 The effects of commercial activities on the environment

**Table 10: The effects of commercial activities on the environment (Environmental Officials)**

Effects of commercial activities	Frequency	Percentage
Loss of biodiversity	1	20
Deforestation	3	60
Soil erosion	-	-
Pollution	1	20
Total	5	100

From questionnaires, 20% of the commercial agriculturalists agreed that commercial activities have led to loss of biodiversity, 60% believe that commercial activities have led to deforestation whereas the other 20% percent think that commercial activities have led to pollution.

**Table 11: The effects of commercial activities on the environment Commercial agriculturalists**

Effects of commercial activities	Frequency	Percentage
Loss of biodiversity	1	20
Deforestation	4	80
Soil erosion	-	-
Pollution	-	-
Total	5	100

For the commercial agriculturalists, 80% agree that commercial activities have affected the environment through deforestation and 20% agree that these activities have led to loss of biodiversity.

Through interviews various respondents said that commercial activities have affected the environment and that one effect leads to the other. For example, the forests and swamps which initially acted as a home for numerous plants and animals are lost. The animals either die or migrate more so when the slash and burn techniques are used. Therefore, deforestation leads to loss of biodiversity and soil erosion with this, Mr. Kalanzi as citizen of Kyanjovu (village) noted that;

*"I remember when I was still young there were many forests since there was limited growth of commercial crops, which are mostly for export purposes. But now, many forests have been cut because people want to grow pineapple they sell to people who transport it to South Sudan and Kenya. When these forests are cut animals remain without any place to stay, so they either die or go to other places. We used to see many animals for example antelopes, monkeys, birds and plants whenever we could go to collect water or firewood from the forests. But the forests are gone we have lost all the plants and animals that used to live in these forests".*

Interviews with commercial agriculturalists revealed that majority of commercial agriculturalists use artificial fertilizers on their plantations in order to get high yields. These include NPK, CAN, Urea, rapid grow and super grow among others, in addition to pesticides like dudaccelemectic, Round up, weed master, 2-4 D amine, Endocil, rocket, sweep all these inevitably lead to pollution of the soil and the water more so when the plantation is established in the swamp.

Some respondents through interviews said that commercial agriculture resulted into soil erosion since trees are cleared and commercial farms are established. When there is heavy rain and strong wind, the soil is carried away because the roots of the trees that formerly anchored the soil are lost. To make matters worse, all the farmers who carry out commercial agriculture apply synthetic fertilizers to their farms so when soil erosion takes place, the soil eroded into water bodies thus affecting human, animal and plant life that is supported

by such water bodies. Most commercial agriculturalists have their farms in the swamps which supply water to other water sources this is detrimental to the environment.

#### 4.5 Strategies to reduce environmental degradation

**Table 12: Strategies to reduce environmental degradation  
(Environmental officials)**

<b>Strategies</b>	<b>Frequency</b>	<b>Percentage</b>
Community based conservation	1	20
Strict laws	2	40
Penalties	1	20
Sensitization	1	20
<b>Total</b>	<b>5</b>	<b>100</b>

Through questionnaires to the environmental officials 20% agreed community based conservation can help to reduce environmental degradation.

40% agreed that setting and implementation of strict laws can reduce environmental degradation.

20% said that penalties can be good strategies to reduce environmental degradation.

20% sensitization of as a strategy can reduce environmental degradation.

**Table 13: Strategies to reduce environmental degradation  
(Commercial agriculturalists)**

<b>Strategies</b>	<b>Frequency</b>	<b>Percentage</b>
Community based conservation	3	60
Strict laws	-	
Penalties	-	
Sensitization	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

60% of the commercial agriculturalists agree that community based conservation can be used as a strategy to reduce environmental degradation

Also 40% believed that sensitization can reduce environmental degradation.

Throughout interviews most respondents said that community based conservation as a strategy can help to reduce environmental degradation in its various forms. Some local council leaders said that; through community based conservation people take responsibility of the degradation and therefore collectively take action to restore the environment

The local council leader of Katoogo said that; when there is community based conservation strategies people can quickly respond in case there are activities like community tree planting, reporting those who encroach on community resources like swamps and natural forests and so on. Also people can be taught on how important forests and swamps are to them and how their destruction is dangerous to their lives, animals and plants.

Some farmers said that formulating and implementing strict laws reduces the rates of environmental degradation. However others said that this has not worked for a long period of time

given the fact that the environmental officials and forest rangers are bribed and therefore let people carry out deforestation for commercial activities which created a negative impact on the environment.

*"At first we were not cutting trees from Kalukompwa forest but with time we gave some money to forest rangers who allowed us into this particular forest, initially we were interested in charcoal burning and timber after which, forests were cleared to carry out farming."*

For example, when Kalukopwa forest was at the level of disappearance, local communities sought to secure cultivable land, this denied this forest a chance to regenerate. As noted by current occupants of the forest, and as I observed, sugar canes, matooke, pine, coffee, and eucalyptus plantations replaced the forest. A farmer in Kyera boasted, *"I planted coffee, pineapples and banana from which I earned money to educate my children"*

Through interviews conducted, most respondents maintained that penalties can be used to reduce environmental degradation. When commercial constructors, commercial agriculturalist and local council leaders were interviewed they agreed that through extending penalties to those who degrade environment the degradation can be minimized. They suggested penalties like imprisonment, paying fines or even destruction of either their property like schools, health care facilities, farms among others. Such can serve as an example to others who would be degraders.

*I don't think if people who carry out their commercial activities from swamps were told to pay a huge amount of money or imprisoned; other would do the same activities from the swamps. So these penalties can help to reduce environmental degradation in this area one of the respondent whose name (withheld) said.*

When interviews were carried out, some respondents said that sensitization if well done can help minimize the rates of environmental degradation which are fostered the capitalistic

idea of search for money. They said that it can be done through churches community radios and community meeting. They also observed that since commercial agriculturalists are potential degraders, their sensitization can result into immediate restoration of the environment.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECCOMENTIONS**

#### **5.1 Introduction**

This chapter gives the summary of the findings, conclusion drawn the findings and discussion in the previous chapter in addition to recommendation to the problem environmental degradation as discovered in the research study.

#### **5.2 Summary of the findings**

The main objective of the research was to explore the financial motivation behind environmental degradation in Buwunga Sub-County, Masaka District. The researcher was guided by specific objective which included: commercial activities responsible for environmental degradation, effects of commercial activities on the environment and strategies that can reduce environmental degradation.

During the research data was obtained from 45 respondents by use of interview guides and questionnaires. The categories involved in the research included: commercial agriculturalist, commercial constructors, local council leaders and environmental officials because they were believed to have adequate knowledge about financial motivation behind environmental degradation and environmental degradation in general.

The research carried out reveals that people's knowledge, ideas and views vary that's the reason why the data has also been summarized in accordance to research objectives has shown below.



### **5.2.1 Commercial activities responsible for environmental degradation**

From the data obtained and analyzed from the field, it is revealed that commercial activities are responsible for environmental degradation. This is so because as people look for income and maximization of profits, the environment is degraded. For instance commercial agriculture and commercial construction requires enormous land thus leading to deforestation, swamps destruction, soil erosion and pollution.

### **5.2.2 The effects of commercial activities on the environment**

From the interviews carried out, majority of the commercial agriculture established their farms after deforestation or in the swamp. Deforestation leads to loss of biodiversity as revealed by the majority of respondents including local council leaders. In addition all the agriculturalists said that they apply fertilizers or pesticides and these affect the quality of the soil, and also causes pollution. The findings also showed that commercial constructions are put after destruction of forests in addition to poor management of the waste generated from their business that leads to environmental degradation.

### **5.2.3 Strategies that can reduce environmental degradation**

The research showed that reducing environmental degradation requires community based conservation, strict laws, sensitization and penalties to deter the would-be environmental degraders. The research also showed that when there is community based conservation and sensitization, local people can be able to know how important the environment is to them thus take good care of it.

### **5.3 Conclusion**

Although capitalism has not fully permeated into every aspect of people's live, it dominates. It has greatly contributed to environmental degradation in its various forms. As private owners of factors of production like land and capital carryout activities meant to generate incomes and for profit maximization the environment is greatly affected say through deforestation, soil erosion, pollution and loss of biodiversity yet no action has been taken. Therefore this calls for various strategies to reduce environmental degradation.

It can also be concluded that although currently the former forests are replaced by commercial plantations in Buwunga Sub-County, Charcoal burning and timber harvesting were the first cause of deforestation.

### **5.4 Recommendation of study**

The following are the recommendations suggested by the researcher.

Sensitization of commercial agriculturalists and farmers at large because is very crucial because they constitute the majority of potential environmental degraders while also bearing the hopes of environment protectors (role in conserving wetlands and forests and restoring depleted ones). Awareness will ensure harmonious coexistence of farmers and the environment. For instance organizations like The Uganda National Farmers Federation should be provided resources to underpin action campaigns in the whole country regarding environmental protection, restoration and conservation.

Given the acute shortage of human and financial resources at district and community levels, the government should employ more environmental personnel at district, county, and sub

county levels and these should be empowered to foster to efficient implementation of policies thereby avoid cases of corruption.

The study observed that most laws and policies regarding environment are conservationist in nature. It is therefore recommended to include restorative laws and policies in all environment policy regimes so that the already depleted environmental resources are restored.

Although its majorly commercial activities which leads to environmental degradation, it is also true that most of the population depend on nature for their survival. There should be an alternative initiative to ensure sustainable use of available natural resources. The government should also ensure that electricity is extended such that people may get involved in nonfarm economic activities like welding, shopkeeping saloons among others.

Since most agriculturalists encroach on wetlands in search for the near sources of water to use on their farms for irrigation and other purposes, there is need for extension of irrigation techniques and technologies which should be affordable by the majority of the farmers.

#### **5.5 Suggestions for further research.**

Since the researcher has carried out research about the financial motivation behind environmental degradation in Buwunga Sub-County, Masaka District, other researcher should carry out financial motivation behind environmental conservation because the research noticed that various conferences and funds put across to ensure environmental conservation but what is the motivation behind this?

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**APPENDIX 1**

**Questionnaires for Commercial Agriculturalists**

**Uganda Martyrs University**

**School of Arts and Social Sciences**

Dear Respondent,

I am Nakabiito Mary, a student at Uganda Martyrs University. The questions below seek your view about the financial motivation behind environmental degradation in Buwunga Sub County. I hereby request you to fill this questionnaire which will help me in my research. Your views will be treated with confidentiality and will only be used for the purpose of writing my research. Please answer the questions as sincerely as possible. I shall be grateful if my request is put into consideration.

**(Tick where appropriate)**

1 Name (optional).....

Sex: Male  Female

Level of education

None  Primary  Secondary  Tertiary

Age 25-35  36-45  46-55  56-65

2. What commercial activities responsible for environmental degradation in Buwunga Sub County?

Activities	Agree	Disagree
Commercial Agriculture,		
Commercial construction		
Industrialisation		

Which commercial crop do you grow?

.....  
.....

3 What was existed before you established this?

.....  
.....

4 Is it on large scale or small scale?

Large scale  small scale

5 Do you apply artificial fertilizers or chemicals?

Yes  No

6 If yes which types?

.....  
.....

7 What are the indicators of environmental degradation?

Indicators	Agree	Disagrees
Loss of biodiversity		
Deforestation		
Pollution		
Soil erosion		

8. What strategies would you suggest to minimize environmental degradation?

Strategies	Agree	Disagree
Community based conservation		
Strict laws		
Penalties		
Sensitization		

Thank you for your cooperation.

APPENDIX 2

Questionnaires for Environmental Officials

Uganda Martyrs University

School of Arts and Social Sciences

Dear Respondent,

I am Nakabiito Mary, a student at Uganda Martyrs University. The questions below seek your view about the financial motivation behind environmental degradation in Buwunga Sub County. I hereby request you to fill these questionnaires which will help me in my research. Your views will be treated with confidentiality and will only be used for the purpose of writing my research. I shall be grateful if my request is put into consideration.

**(Tick where appropriate)**

1. Name (optional).....

Sex: Male  Female

Level of education

Certificate  Diploma  Degree

Age: 25-35  36-45  46-55  56-65

2. What commercial activities responsible for environmental degradation in Buwunga Sub County?

Activities	Agree	Disagree
Commercial Agriculture,		
Commercial construction		
Industrialisation		

3 What are the indicators of environmental degradation in this area?

Indicators	Agree	Disagree
Loss of biodiversity		
Deforestation		
Pollution		
Soil erosion		

4 What are the strategies to reduce environmental degradation?

Strategies	Agree	Disagree
Community based conservation		
Strict laws		
Penalties		
Sensitization		

5 Are there any government policies regarding environmental protection?

Yes  No

6 If yes, what are they?

A.....

B.....

C.....

7. How effective are they?

Thank you for your cooperation.

### APPENDIX 3

#### Interview Guide For Commercial Agriculturalist

Dear Respondent,

I am Nakabiito Mary, a student at Uganda Martyrs University. The questions below seek your view about the financial motivation behind environmental degradation in Buwunga Sub County. I hereby request you to answer these questions which will help me in my research. Your views will be treated with confidentiality and will only be used for the purpose of writing my research. I shall be grateful if my request is put into consideration.

1. What are the commercial activities responsible for environmental degradation in this area?
2. Which commercial crops do you grow?
3. Is it on large or small scale?
4. Which physical feature existed before you established your plantation?
5. Do you apply artificial fertilizers or pesticides?
6. If yes which types?
7. What are the major indicators of environmental degradation you have noticed in the last 10 years?
8. What are the effects of environmental degradation?
9. What strategies can help to reduce environmental degradation?
10. Are there any laws regarding environmental protection?
11. If yes, are they effective? Thank you for your cooperation.



## APPENDIX 4

### Interview Guide For Commercial Constructors.

Dear Respondent,

I am Nakabiito Mary, a student at Uganda Martyrs University. The questions below seek your view about the financial motivation behind environmental degradation in Buwunga Sub County. I hereby request you to answer these questions which will help me in my research. Your views will be treated with confidentiality and will only be used for the purpose of writing my research. I shall be grateful if my request is put into consideration.

1. What are the commercial activities responsible for environmental degradation in this area?
2. Which kind of commercial construction do you own?
3. What existed before you put up such a construction?
4. What are the major indicators of environmental degradation you have noticed in the last 10 years?
8. What are the effects of environmental degradation?
9. What strategies can help to reduce environmental degradation?
10. Are there any laws regarding environmental protection?
11. If yes, are they effective?

Thank you for your cooperation.

## APPENDIX 5

### Interview Guides for Local Council Leaders (1)

Dear Respondent,

I am Nakabiito Mary, a student at Uganda Martyrs University. The questions below seek your view about the financial motivation behind environmental degradation in Buwunga Sub County. I hereby request you to answer these questions which will help me in my research. Your views will be treated with confidentiality and will only be used for the purpose of writing my research. I shall be grateful if my request is put into consideration.

1. What are the commercial activities in this area?
2. What the indicators of environmental degradation in this area?
3. What are the strategies to reduce environmental degradation?
4. Are there any government policies about the environmental protection?
5. Are they effective?
6. Do you operate with any environmental officials to reduce environmental degradation?