



**BUSITEMA
UNIVERSITY**
Pursuing Excellence

DRIVERS OF LAND DEGRADATION

**A Case of Wetlands in Namasagali Sub County, Kamuli
District**

AKULLO GLORIA

BU/UG/2011/210



SUPERVISOR: ASSOC PROFESSOR ISABIRYE MOSES

**A research project report submitted to the Faculty of Natural Resources and
Environmental Sciences, Busitema University in partial fulfillment of the requirements for
Award of Bachelors Degree in Natural Resource Economics**

JUNE 2014

DECLARATION

I Akullo Gloria do hereby declare that this research work has been through my own efforts and never been submitted to Busitema University or any institution of higher learning for award of a degree or any qualification

.....
.....

Date.....
.....

AKULLO GLORIA

APPROVAL

This is to confirm that this research report is original and has only been through the efforts of Akullo Gloria after pursuing a three year Bachelor of Science degree in Natural Resource Economics of Busitema University. She has therefore fulfilled part of her requirements for the award of the degree in natural resource economics of Busitema University

Supervisor

.....

Date.....

Assoc Professor Moses Isabirye

Senior lecturer, Busitema University

DEDICATION

I dedicate this report to my beloved parents, Alfred Okello Odur and Kella Ejang Odur, my sisters Angella, Veronica, Claire, Caroline and Marisyana

o o

o o

ACKNOWLEDGEMENT

I would like to take this opportunity to thank people who have made it possible for this work to come to reality.

First I wish to convey my special thanks to my research supervisor professor Isabirye Moses for the guidance and encouragement during the entire period of the research project and the entire staff of the faculty of natural resources and environmental sciences of Busitema university Namasagali campus.

I also extend my sincere thanks to my parents, Alfred Okello Odur and Kella Ejang Odur for the moral support and laying a firm foundation for my education. May the Almighty God give you more years to enjoy the fruits of your hard work. To my sisters Angella, Veronica, Claire, Caro and Marisyana for their words of encouragement and support that kept me striving for the best. To my cousins Geoffrey omia and wife Harriet omia who have always been my second parents.

Special thanks to Mwima Kuzaifa for his assistance during data collection and my friends Mary Dawaru ,Immelda Nyangoma,Mabirizi julius,Tusiime Christopher,Ayebale lucky,Tumwine Gerald Akampumuza Aggrey and all other course mates that have not been mentioned but assisted me in one way or the other .May the Almighty God reward you abundantly.

Above all I give thanks to God the Almighty who has seen me all through the bad and good times

o

TABLE OF CONTENTS

DECLARATION	i
APPROVAL	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
ABSTRACT	x
CHAPTER ONE	1
1.0 GENERAL INTRODUCTION	1
1.1 Introduction	1
1.2 Background of the study	1
1.3 Statement of the problem	2
1.4 Objective of the study	3
1.5 Research questions	3
1.6 Conceptual framework	4
1.7 Significance the of study	4
1.8 Scope of the study	4
2.0 LITERATURE REVIEW	5
2.1 Introduction	5
2.2 Definitions and concepts	5
2.3 Wetlands	6
2.3.1 Wetland distribution and types	6
2.3.2 Ecological and economic importance of wetlands	6
2.4 Wetland degradation	9
2.5 Methods used to study wetland degradation	10
3.1 Introduction	13
3.2 Research design	13
3.3 Study area /targeted population	13
3.4 Sample size and sampling procedure	14

3.4.1 Sample size	14
3.4.2 Sampling procedure	14
3.5 Data types and collection methods	14
3.5.1 Data types.....	14
3.5.2 Data collection methods.....	14
3.6 Validity and Reliability of data collection instruments	15
3.7 Ethical Consideration.....	15
3.8 Data Analysis	15
CHAPTER FOUR.....	16
4.0 PRESENTATIONS AND DISCUSSION OF RESULTS	16
4.1 Introduction	16
4.2 Social economic information.....	16
4.2.1 Gender of respondent.....	16
4.2.2 Level of education.....	16
4.2.4 Marital status.....	18
4.2.5 Membership to any community association	19
4.2.6 Occupation of the respondents.....	20
4.3 Activities carried out in the wetland.....	21
4.3.1 Relationship between activities carried out and landownership	22
4.3.2 Relationship between activities carried out, gender and age respondent.....	22
4.4 State of wetlands.....	24
4.5 Responses to wetland degradation.....	25
4.6 What do you think can be done to reduce wetland degradation?	25
CHAPTER FIVE.....	27
5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	27
5.1 Introduction	27
5.2 Conclusions	27
5.3 Recommendations	28
5.4 Areas of future research.....	28
REFERENCES.....	29

LIST OF ACRONYMS

CBA	Cost Benefit Analysis
DPSIR	Driver Pressure State Impact Response
EEA	European Environment Agency
EU	European Union
FAO	Food and Agricultural Organization
MEA	Millennium Ecosystem Assessment
NAADS	National Agricultural Advisory Services
NEMA	National Environment Management Authority
NFA	National Forest Authority
NWCMP	National Wetlands Conservation Management Programme
SPSS	Statistical Package for Social Sciences
UNEP	United Nations Environment Programme
WMD	Wetlands Management Department

LIST OF FIGURES

Figure 1conceptual framework.....4
Figure 2 Abar graph showing percentage distribution of respondent's level of education.....17
Figure 3 Age frequency distribution of respondents 18
Figure 4 Pie chart showing membership to associations.....20

LIST OF TABLES

Table 1: Gender of respondents involved in wetland activities16

Table 2: Showing marital status of respondents in percentages.....19

Table 3; Showing occupation of respondents in percentages.....21

Table 4 Illustration of activities carried out by respondents21

Table 5; Relationship between activities carried out, gender and age of respondent22

Table 6; Showing whether the wetland is degraded or not24

Table 7; Shows whether there are actions being taken to respond to wetland degradation or not.25

ABSTRACT

Despite the importance of Ugandan wetlands in sustaining rural livelihoods, widespread drainage and habitat degradation has occurred. In rural areas where majority of the population rely on wetlands for both direct consumption and ecological functions, wetlands face great threats of degradation as the population increases. In the study to determine the drivers of wetland degradation wetlands in Namasagali sub county were considered covering four neighboring villages with objectives of determining activities carried out in the wetlands, state of wetlands, responses to wetland degradation and obtaining the peoples opinion on what can be done to reduce the degradation, data was obtained through questionnaire interviews observations and references to available information and analyzed with statistical packages .The study revealed that there are high levels of degradation due to increased clearance of natural vegetation for mainly agricultural activities like crop growing and cattle grazing,brickmaking,charcoal burning and such activities are major driving forces behind land degradation due to increased levels of soil erosion, there are low levels of responses to wetland degradation and limited awareness towards sustainable use and management of wetland resources, gender and age are relevant factors in determining the nature of activities carried out in wetlands with the male and age group of 30-39 taking a great percentage of participants. Activities in wetlands are independent of whether one owns land or not. Based on the study, the following recommendations were made; need to sensitize and change attitude of community towards environment and natural resource management, there is need for proper coordination and involvement of stakeholders at various levels in management of natural resources, carryout research activities to provide information on the state of wetland resources in order to develop appropriate and efficient mechanisms to overcome the challenges at hand, forming of associations for farmers at local levels for easy monitoring of their activities and implementation of government programmes like NAADS and provision of assistance to farmers inform of relief for controlling pests and diseases, consider gender equality in use and management of natural resources to avoid gender conflicts

CHAPTER ONE

1.0 GENERAL INTRODUCTION

1.1 Introduction

This covered background to the study, statement of the problem, objectives of the study, research hypotheses/ Questions, conceptual framework, significance/Justification of the study, scope (coverage) of the study.

1.2 Background of the study

Land is a fundamental natural resource whose productivity directly impacts on economic growth and development of all Ugandans most of whom derive their livelihood from land based economic activities including subsistence farming. Uganda covers a total area of 241550km² and its estimated that 125000km² or 62.5% of Uganda is arable, relatively fertile and receives sufficient rainfall for rain fed cropping and pasture (IFPRI 2001, Olson and berry 2003) .most of the arable land is under subsistence agriculture (37% of Uganda's total land area) and thus agricultural sector being the largest driver of land degradation. Land degradation refers to the temporary or permanent lowering of the productive capacity of land (UNEP, 1992b). Stagnant or declining unit productivity coupled with arising population means more land has to be converted to agriculture to meet the growing demand for food locally and within the regions. This trend is causing problems of land degradation, deforestation, wetland reclamation and transformation of grasslands and woodlands to agricultural use. In this study we concentrate on wetland degradation.

Wetlands are considered essential for biodiversity conservation. Less known are the multiple functions and livelihood services that wetlands provide to local communities in many parts of the world: e.g. The provision of food, drinking water, building materials, etc. In addition, wetlands play an important role in water regulation, purification and sanitation. In Uganda Wetlands represent one of the vital natural resources it is endowed with; and although the overall economic value of wetlands in Uganda has not yet been quantified, Emerton et al, (1999), estimates the purification function of the 5km²Nakivubo wetland in Kampala at US\$1.3 million

REFERENCES

Alice Nakiyemba Were, (March, 2013) stakeholder perspectives on the governance of natural resources in Uganda lake Victoria catchment; case of upper river Rwizi and Iguluibi water catchment

Barbier E (1993), the economic value of Tropical Ecosystems; Tropical wetlands, IIED, London UK

Chris klok, Bert Harms, Shi Xiaoping, Ou Weixin, Zhu Lina, Zhu Peixin, Biana Nijhof, Michiel Van Eupen, Annemarie Groof and Chen Kelin, 2008. Wise use of wetlands in China; integral approach to Assess and Evaluate Opportunities and Risks of Biodiversity in wetlands in socio-economic context. Wageningen, Alterra, Alterra-rapport 1763.

D.S. Baldwin et al (2005), Recommended methods for monitoring flood plains and wetlands. MDBC publication No.72/OE ISBN192138

European Environment Agency EEA; <http://www.eea.eu.int>.

Gorham. (1998). The biochemistry of Northern peat land and its possible responses to global warming. Biotic feedback in the global climatic system, New York

Haase, D. and Nuissi, H. (2007). Does urban sprawl drive in water balance and policy? The case of Leipzig (Germany) 1870-2003. *landscape and urban planning*, 80; 1-103

IUCN 2005, From Conversion to Conservation: Fifteen Years of Managing Wetlands for People and the Environment in Uganda.

National environment management authority, 2008; State of environment report for Uganda
NEMA (2009). Uganda; Atlas of our changing environment. National environment

NEMA. (1998). State of the Environment Report for Uganda 1998. National Environment

NEMA. (2010). National state of environment report 2010, national environment management Authority, Kampala Uganda

Olson J. and Berry L. (2003), Land degradation in Uganda; its extent and impact. Mimeo

State of Environment Report for Kamuli District 1997



The Millennium Ecosystem Assessment, (2005), Ecosystem and human well-being

The National wetlands policy Uganda (1995), National policy for conservation and management of wetland resources. The Republic of Uganda, Ministry of natural resources

The Ramsar Convention on the Management of Wetlands of International Importance, 1971

Turner, K, 1991; Economics and Wetland Management, *Ambio*, 20, 59-63

Turner, K, and Jonest, T. (1991) wetlands; market interventions failures, Earth scan Publications, London

U.S.EPA.2002, Methods for Evaluating Wetland condition; study design for monitoring wetlands. Office of water, U.S Environmental Protection Agency, Washington, DC.EPA-822-R-02-015

Verhoever, J.T.A; Beltman, B; Bobbink, R, Whigham, D.F. (Eds) (2006); Wetlands and natural resource management

Wasswa H, Mugagga F and Kakembo V (2013), Economic implications of wetland conversion to local people's livelihoods; the case of Kampala-Mukono Corridor (KMC) wetlands in Uganda. *Acad.J.Enviro.Sci.1* (4); 066-077