

**BUSITEMA UNIVERSITY**

**Faculty of Natural Resources and Environmental Sciences**

**Economic value of ecosystem services provided by wetlands, role of wetlands  
in enhancing community livelihood and resilience to climate change, in  
Hoima District, Albertine rift valley zone, Western region Uganda**

**By**

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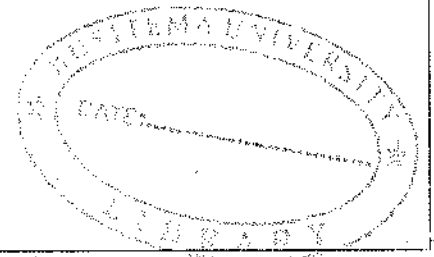
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**A RESEARCH DISSERTATION REPORT SUBMITTED IN THE PARTIAL FULLFILLMENT OF  
THE REQUIREMENT OF THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN  
NATURAL RESOURCE ECONOMICS OF TO BUSITEMA UNIVERSITY**

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### DECLARATION

I **AMANYA DAN**, hereby declare that this research report is my original work and to the best of my knowledge it has never been submitted to any university or any other institution of higher learning for any academic award.

.....Date 26/06/2015

AMANYA DAN

## APPROVAL

This serves to certify that ANANTA DAN  
did research that I had the pleasure to supervise. I confirm that this report is a true representation of the findings in it.

I am therefore recommending that the report be submitted to the Faculty of Natural Resources and Environmental Sciences of Busitema University.

  
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## **DEDICATION**

I dedicate this work to my great mum Kisémbó Stella, my two great fathers Dr. Bategeka Lawrence who has been catering for my education throughout my secondary and university education and my biological father Mr. Kasangaki John, my sister Kaahwa Oliver and all my brothers and then whoever contributed toward my study. All deserve special thanks mentioned here for their encouragement, tolerance and perseverance.

I as well dedicate this report to the friends I had at the university like Musabe Master, Mugalu Simon, Kyomugasho Sharon, Atugumya Armstrong Barcelona and Naturinda Zérubabell, Kyaligonza Dainah including all other friends and classmates who would give me encouragement and direction.

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## Table of contents

### Contents

DECLARATION.....	i
Approval .....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS .....	iv
Table of contents.....	v
List of figures .....	viii
List of tables.....	ix
List of acronyms and abbreviations.....	xi
ABSTRACT .....	xii
CHAPTER- I: INTRODUCTION.....	1
1.0. INTRODUCTION .....	1
1.1. BACK GROUND.....	1
1.2. Problem Statement .....	6
1.3. Purpose of the Study .....	7
1.4. Objectives of the Study .....	7
1.5. Research Questions.....	7
1.6. Justification of the Study .....	8
1.7. Scope of the study .....	8
1.8. Conceptual model .....	9
CHAPTER-II: LITERATURE REVIEW.....	11
2.1. INTRODUCTION .....	11
2.2. BENEFITS DERIVED FROM WETLANDS.....	11
2.3. The value of ecosystem services of wetlands .....	14
2.4. People's dependence on wetland ecosystems.....	15
2.5. The role of ecosystem services in reducing people's vulnerability .....	16
2.6. Ecosystem Services Reliance .....	17
2.7. Payment for Ecosystem Services (PES).....	18
2.8. Total Economic Value for Wetland Resources .....	18
2.9 Economic costs for wetland conservation and policy implementation .....	19
2.10: Why Are Wetlands always Under-Value and Over Use.....	20
2.11: The National Environment Management Policy .....	20

2.12: Objective of the wetland conservation and management policy .....	21
2.13.: Threats to wetlands.....	22
2.12. Role of wetland in climate change adaptation.....	22
2.12. Conclusions.....	24
CHAPTER THREE: MATERIAL AND METHODS .....	25
3.1. Research Design.....	25
3.2. Description of the study area .....	25
3.3. Sampling areas.....	26
3.4. Study Population.....	26
3.5. Sampling Technique, sample size, sampling design and sampling procedure.....	27
3.6. Data type and Collection .....	27
3.6.1. Data types.....	27
3.6.2. Data collection methods, .....	27
3.7. Data Analysis .....	28
3.8. Ethical Consideration.....	28
CHAPTER FOUR: RESULTS .....	29
4.1. INTRODUCTION .....	29
4.2. Social-economic and demographic characteristics of the people in the communities around the selected wetlands in Hoima district.....	29
4.3. Livelihood activities that people engage in to earn a living.....	32
4.4 Size of land and main source of income.....	35
4.4.2. Expenditures of the respondents.....	35
4.5. Ecosystem services obtained from the wetlands for people's livelihood .....	36
4.5.1. Dominant type of vegetation on the wetlands .....	36
4.5.2 Biodiversity components in the wetland.....	36
4.6 Benefits obtained from wetland systems.....	42
4.6.2 Basic needs of people for their livelihood.....	45
4.7. Other important services provided by wetlands.....	45
4.8 valuation of wetland ecosystem service obtained .....	49
4.10. Policy issues governing wetland use .....	60
4.11. Utilization of the wetland in adaptation to climate change.....	61
CHAPTER-V: DISCUSSION.....	75
5:1. Introduction.....	75
5.2. General discussion.....	75

5.3. Social-economic and demographic characteristics of the people in the communities around the selected wetlands in Hoima district.....	75
5.4. 1. Livelihoods activities and land size of respondents .....	77
5.4.2. Expenditures of the respondents.....	78
5.5. Ecosystem services provided by the wetlands.....	79
5.5.1. Value of fresh water from wetlands.....	80
5.5.2 Economic valuation of the wetland.....	80
5.6. Policies governing wetlands.....	81
5.7. Challenge that people face living near wetlands .....	82
5.8. Recommendations.....	82
5.8.1 General Recommendations.....	82
5.8.2. Recommendation to NEMA.....	83
5.8.3. Recommendation to the Hoima district authority.....	83
REFERENCES.....	84
Appendix I.....	87
Appendix II: Questionnaire used for data collection.....	90
Appendix III: Maps of the study area .....	96
Appendix IV: Plates.....	99



**List of figures**

Figure 1: conceptual model ..... 9

Figure 2: Wetland services ..... 11

Figure 3: Projected impacts in some key water-based systems and water resources under temperature and precipitation changes approximating those of the special report of emission scenarios (SRES, modified from STRP2002) ..... 24

Figure 4 : Extracted map of Hoima district showing sub-counties selected for the study ..... 96

Figure 5: Clipped map of sub-counties showing the selected parishes for the study ..... 97

Figure 6: Clipped map of Hoima district in the map of Uganda ..... 98

## List of tables

Table 1: Age of respondents, their own born family children and the relatives in the family (dependents) (N=70)	30
Table 2: Socioeconomic characteristics of respondents	31
Table 3: Livelihood activities that respondent engage in to earn a living	33
Table-4: Size of land owned by respondents, their main and secondary sources of income	35
Table-5: Expenditures (\$) of the respondents on school due, health, food and investments	36
Table 6: Dominant type of vegetation on the wetlands	38
Table 7: Names of dominant vegetation on the sampled wetlands with their local names and scientific names	39
Table 8: Common fish species and birds, insects and other wetland species	40
Table 9: Water characteristics in the different wetland sites	41
Table 10: Ecological description of the wetlands biodiversity on the different study sites	43
Table 11: Ecosystem services and natural resources obtained from the wetlands	44
Table 12: Basic needs of people for their livelihood in relation to the wetland ecosystem services and natural resources	45
Table 13: Ecosystem services and goods obtained from the wetlands	46
Table 14: Showing more important other services provided by the wetlands	47
Table 15: Wild foods from wetlands and the wetland services that people do not wish to lose	48
Table 16: Monetary value of wetlands in terms of crop farming yield per annum in the three wetlands of Hoima district	49
Table 17: Number of animals commonly reared by the respondents	50
Table-18: Monetary value of wetland pastures in the three selected wetlands in Hoima district	50
Table 19: Monetary value of wetland fresh water obtained from the three wetlands studied in Hoima district	51
Table 20: Monetary value of wetlands in terms of fuel wood obtained from the wetlands in Hoima district	52
Table 21: Monetary value of thatching grass and medicinal plants obtained from the selected wetlands	53
Table 22: Estimated value of the recreation and tourism, education and research ecosystem services from the wetlands	54
Table 23: Estimated value of water purification and climate change adaptation services provided by wetlands	54
Table 24: Total estimated economic value of the selected wetlands in Hoima district	55
Table 25: Willingness to pay for the ecosystem services and wetland goods, natural resource valued in US dollars	55

Table 26: Crop area cover (ha), with the out puts of maize, cassava, yams and rice (yield in kg) and bananas in number of pieces.....	56
Table 27: The amount of output produce that is consumed and house hold level by respondents (kgs).....	57
Table 28: The amount of output that is marketed by respondents to earn a living (output is in kgs) .....	58
Table 29: Earning from the sale of agricultural produce by the respondents (US dollars).....	58
Table 30: Food crops production and periods of food scarcity, dry periods. ....	59
Table 31: List of some Policies applying to ecosystems in Uganda .....	60
Table 32: Are there policies you know that govern the use of this wetland .....	61
Table 33: How are the wetlands important in adaptation to rainfall scarcity environmental climate change conditions;.....	61
Table 34: How are the wetlands important in adaptation to low water quantities in the soils .....	62
Table 35: Some of approaches by the community to mitigate the effects of climate change using wetlands .....	63
Table 36: Estimate damage or loss caused by climate change outcome experienced in the last (10-15 years) .....	63
Table 37: GLM (Generalized Linear model) to test for the effect of independent factors on the most important of Ecosystem services provided by wetlands in relationship to crop type grown in Hoima district;.....	65
Table 38: GLM (generalized linear model) to test for the effect of independent factors on the reasons given by farmers about the reason for change yields attributable to climate change in Hoima district: .....	66
Table 39: GLM (Generalized linear model) to test for the effect of independent factors on the good practices to mitigate climate change using wetlands .....	67
Table 40: GLM (Generalized linear model) to test for the effect of independent factors on the good practices to mitigate climate change using wetlands .....	68
Table 41: GLM (Generalized linear Model) to test for the effects of independent factors on the Role of National Environmental Management Authority's roles in the management of wetlands; .....	69
Table- 42 :GLM (Generalized Linear Model) to test for the effects of independent factors on the Role of national environmental management authority's roles in the management of wetlands .....	71
Table 43: GLM (Generalized Linear Model) to test for the effects of independent factors on knowledge about the current threatening activities to the wetland in Hoima district; .....	72
Table 44: Cross-correlation matrix showing naïve multiple correlations of ecosystem services variables with community demographic, social and livelihood characteristics.....	87
Table 45: Cross-correlation matrix showing naïve multiple correlations of ecosystem services variables with community demographic, social and livelihood characteristics .....	88

### List of acronyms and abbreviations

<b>ELC</b>	<b>Environmental Literacy Council</b>
<b>FAO</b>	<b>Food and Agriculture Organization</b>
<b>IEA</b>	<b>International Energy Agency</b>
<b>IFAD</b>	<b>International Fund for Agricultural Development</b>
<b>IPCC</b>	<b>Intergovernmental panel on climate change</b>
<b>MDGs</b>	<b>Millennium Development Goals</b>
<b>MEA</b>	<b>Millennium Ecosystem Assessment</b>
<b>MWLE</b>	<b>Ministry of Water, Lands and Environment</b>
<b>NEMA</b>	<b>National Environment Management Authority</b>
<b>PES</b>	<b>Payment for Environmental Services</b>
<b>STRP</b>	<b>Scientific and Technical Review Panel</b>
<b>USD</b>	<b>United States Dollar</b>
<b>USDA</b>	<b>United States Department of Agriculture</b>
<b>WMD</b>	<b>Water Management Department</b>
<b>WRI</b>	<b>Water Resources Institute</b>

## **ABSTRACT**

The selected wetlands of Kaitabahuma, kiribanywa and Wambabya wetland provide important ecosystem goods and services on which the communities around them rely for their livelihood. However, these wetlands are faced with some of the most severe forms of unsustainable use, which has reduced the ability of these wetlands to provide the needs of a growing population. A number of specific interventions have been initiated to reverse the situation. However, most of these have pursued different resource use options without knowledge of the values that residents attach to the different wetland uses, and thus their preferences for different management options. Among the key hindrances to sustainable management of the wetlands is lack of knowledge of the economic values of the wetlands in regard of the different wetland uses. This study aimed at identifying the economic value of ecosystem services provided by wetlands, role of wetlands in enhancing community livelihood and resilience to climate change in the Albertine region, western Uganda a case study on Wambabya, Kaitabahuma and kiribanywa wetlands, in Hoima district. The overall objective for the study was to attach economic value to the ecosystem services that wetlands provide to communities around them in relation to peoples livelihood attainment in these surrounding communities. The study was cross sectional and used both qualitative and quantitative approaches of data collection; data collected was analyzed and presented in tables. The methods of data collection were basically interviews, questionnaires and observation of events in the field. A total number of 70 (seventy) respondents was selected for this research study and these were from three different study sites that is Wambabya, Kaitabahuma and kiribanywa wetlands. The main data collection tools employed for the study were questionnaires and field observation. The valuation methods used were basically contingent valuation and market price of products. These methods were essential in ascertaining how much amount the respondents are willing to pay for the different ecosystem services provided by the wetlands in Hoima district. The findings revealed that there were many women involved in subsistence farming than men. The majority of the households derive their livelihood from the wetlands around their communities. Findings further show that most individuals use the wetland for agriculture among other activities like brick laying, grazing and hunting. The earnings from these activities per month continue to decline because of the changing status of the wetlands that is in terms of the biodiversity and the low water levels; this can be attributed to the poor use of the wetland areas by the surrounding community which has resulted into the degradation of the wetlands in Hoima district.

**Key Words:** *Ecosystem services, wetlands, Economic value, fresh water, Albertine region, western Uganda.*

# **CHAPTER- I: INTRODUCTION**

## **1.0. INTRODUCTION**

This chapter includes a description of the study and the analysis of the research problem.

It includes the problem identification, description and the justification of the study. It also includes the research objectives and conceptual frame work and the scope of the research study

## **1.1. BACK GROUND**

In order to make better decisions regarding the use and management of wetland ecosystem services and their importance to human beings, society must be assessed. The importance or "value" of ecosystems is viewed and expressed differently by different disciplines, cultural conceptions and different philosophical views

Wetlands are hotspots of the areas where they are located by the fact that, they hold a great number of biodiversity (Kipkemboi 2006). So Wambabya, Kaitabahuma and kiribanywa wetland systems are not only sites of international importance but also of a great social-economic role at the local level as a source of water for domestic use, livestock and wildlife, pasture for the local herds of cattle during droughts, fish and materials for handcrafts and thatching houses.

In Uganda wetlands have a great contribution to the Gross Domestic Product which is estimated to be Uganda Shillings 6.5 to 7.0 billion (GOU 2002). In addition, these wetlands provide direct income opportunities to rural communities and indirect benefits in form of environmental goods and services such as purification of water, control of floods and water storage that improves the livelihoods of rural population (Mugisha 2011, Opio 2008).

However, in Uganda, conversion of wetlands to other land uses is increasingly becoming evident and hence affecting the wetland dependent communities in both urban and rural areas. Poor land use practices around the Wetlands have stimulated human induced environmental problems which have negatively affected the availability and socio-economic value of wetland resources that are crucial to the livelihoods of neighboring local communities. The lost wetland resources and their socio-economic value indirectly reflect the conservation cost the rural people incur as they search for either scarce wetland resources or substitutes for the wetland goods and services. Consequently, residents walk long distances, and spend more time and money while looking for scarce resources.

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