

BUSITEMA UNIVERSITY

FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES

**ECONOMIC VALUATION OF WETLANDS: THE CASE STUDY OF
KAGANGO WETLAND IN KABWOHE-ITENDERO TOWN COUNCIL
SHEEMA DISTRICT**

BY

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**A RESEARCH REPORT SUBMITTED TO THE FACULTY OF NATURAL
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FULFILLMENT FOR THE AWARD OF THE BACHELOR'S DEGREE OF
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BUSITEMA UNIVERSITY.**

JUNE 2015

DECLARATION

I, **RUBAGUMYA OSHEA**, do declare that this research report is my original work. The information given in this report has been prepared by me and references were made purposely for external informational cross reference only. It is my original report and it has never been submitted to any institution of higher learning. I, therefore, take full responsibility for any errors that may arise in this work as a result of omission or otherwise.

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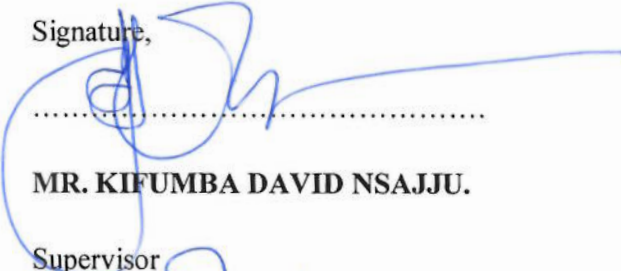
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APPROVAL

This is to certify that the work titled "Economic valuation of wetland resources, a case of Kagango Wetland in Kabwohe-Itendero Town Council, Sheema district" has been done under my supervision and is now ready for submission to the Faculty of Natural Resource Economics and Environmental Science of Busitema University.

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Date..... 

DEDICATION

I would like to dedicate this report to my beloved parents Mr. Biryabarema T.A Oshea and Mrs. Enid Biryabarema for taking care of me and for their financial and moral support.

I also dedicate this report to Naigaga Esther, my brother Kabandize Oinemukama and my sisters Oddity Nayebare, Nyakato Owamukama and Oshenid Kekijo.

Above all, this work is dedicated to the almighty God who gave me the gift of life and has seen me through all the hardships.

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TABLE OF CONTENTS

DECLARATION	i
APPROVAL	ii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS.....	v
LIST OF ACRONYMS	ix
LIST OF FIGURES	x
LIST OF PLATES	xi
LIST OF TABLES	xii
DEFINITION OF KEY TERMS.....	xiii
ABSTRACT.....	xiv
CHAPTER ONE:	1
1.0. INTRODUCTION.....	1
1.1. Background.....	1
1.1.1. What are wetlands?.....	1
1.1.2. Global Wetland distribution.....	1
1.1.3. Uganda’s Wetland distribution.....	2
1.2. Statement of the problem.....	3
1.3. Significance and justification of the study.....	5
1.4. Aim and Objectives.....	5
1.4.1. Major Objective	5
1.4.2. Specific Objectives	5
1.4.3. Research Questions	6
1.5. Conceptual framework	6
1.6. Area of study.....	7
1.6.1. Location	7
1.6.2. Population	8
1.6.3. Ecological features	8
1.6.4. Socioeconomic activities	8
1.7. Limitations of the study.....	9
CHAPTER TWO	10
2.0. LITERATURE REVIEW.....	10

2.1.	Introduction	10
2.1.1	Status of wetlands.....	10
2.2.	Wetland benefits	11
2.2.1.	Importance of economic valuation	15
2.3.	Valuing the wetland uses	15
2.3.1.	Introduction.....	15
2.3.2.	Replacement cost method as a measure of Economic Value.	16
2.3.3.	Contingent valuation method (CVM).....	16
2.3.4	Conjoint analysis/Choice modeling method (CA).....	17
2.3.5.	Travel cost method (TCM),	18
2.3.6.	Hedonic pricing method (HPM).....	19
2.3.7.	Production factor method (PFM)	20
2.3.8	The Averting Behaviour Method (ABM)	21
2.3.9.	Damage Costs Avoided Method.....	22
2.4	Best ways for wetland conservation.....	22
2.4.1	Community involvement in the management of the wetland resources	24
CHAPTER THREE.....		26
3.0.	METHODS OF STUDY	26
3.1	Research design	26
3.2	Study population	26
3.3	Study site	26
3.4	Sample size and Sampling Procedure	26
3.4.1	Sample size	26
3.4.2	Sampling technique and procedure	26
3.5	Data collection Methods and types	27
3.5.1	Data types	27
3.5.2	Data collection methods.....	27
3.6	Validity and Reliability of the data collection instruments	28
3.6.1.	Validity of data collection instruments.....	28
3.6.2.	Reliability of data collection instruments.	28
3.7.	Ethical considerations	28
3.8.	Data processing and analysis	29

CHAPTER FOUR.....	30
4.0. DATA ANALYSIS AND INTERPRETATION.....	30
4.1. Introduction.....	30
4.1.1. Social-economic characteristic of the respondents.....	30
4.2 Economic utilization of the wetland.....	33
4.2.1. Relationship between the level of education and activities carried out.....	34
4.2.2. Reasons for encroachment on the wetland.....	34
4.2.3. Response about the presence of observable impacts resulting from the continued encroachment of Kagango the wetland.....	35
4.2.4. Effects of encroachment on Kagango wetland.....	36
4.3. Economic value of the wetland.....	36
4.3.1. Products derived from the wetland.....	37
4.3.2. Services derived from the wetland.....	38
4.3.3. Presence of perfect substitutes.....	38
4.3.4. Replacement costs of the reduced or lost wetland ecosystem products and services.....	39
4.3.5. Relationship between individuals' replacement costs of the reduced or lost wetland ecosystem products and services and gender.....	40
4.3.6. Economic valuation of the wetland.....	41
4.4. Wetland conservation efforts.....	41
4.4.1. Willingness to contribute to the restoration program.....	41
4.4.2. Estimated individuals' willingness to contribute for the restoration program.....	42
4.5. Evidence of encroachment on Kagango wetland.....	45
CHAPTER FIVE.....	54
5.0. DISCUSSION, CONCLUSION AND RECOMMENDATIONS.....	54
5.1 Discussion.....	54
5.2. Conclusions.....	59
5.3. Recommendations.....	60
5.4. Other areas for further research.....	61
REFERENCES.....	62
APPENDICES.....	65
APPENDIX 1. Questionnaire for data collection.....	65
APPENDIX 1. Individuals' location in relation to their level of education.....	71
APPENDIX 3. Summary of Ecosystem services derived from Kagango wetland.....	72

APPENDIX 4. Aggregate replacement costs of Kagango wetland	73
APPENDIX 5. Map of Uganda showing location of Sheema District	74

LIST OF ACRONYMS

ABM	Averting Behaviour Method
CA	Conjoint Analysis
CVM	Contingent Valuation Method
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GoU	Government of Uganda
KITC	Kabwohe-Itendero Town Council
MA	Millennium Ecosystem Assessment
MTTI	Ministry Of Trade Tourism and Industry
MWE	Ministry of Water and Environment
MWLE	Ministry of Water, Lands and Environment
NEMA	National Environmental Management Authority
NWP	National Wetland Policy
SDLG	Sheema District Local Government
TCM	Travel Cost Method
TEV	Total Economic Value

LIST OF FIGURES

Figure 1. 1.	Total Economic Value (TEV) framework	6
Figure 1. 2.	Location of Kagango wetland	7
Figure 4. 1.	Gender distribution of the respondents	30
Figure 4. 2.	Marital status of the respondents	31
Figure 4. 3.	Representation of the age of the respondents	31
Figure 4. 4.	Education level attained by the respondent	32
Figure 4. 5.	Occupation of the respondent	33
Figure 4. 6.	Activities carried out in Kagango wetland	33
Figure 4. 7.	Comparison between the level of education and activities carried out in the wetland	34
Figure 4. 8.	Comparison of reasons given by community for encroachment on the wetland	35
Figure 4. 9.	Presence of observable changes on Kagango wetland	35
Figure 4. 10.	Observed changes resulting from encroachment of Kagango wetland	36
Figure 4. 11.	Products derived from Kagango wetland	37
Figure 4. 12.	Services derived from Kagango wetland	38
Figure 4. 13.	Responses on whether there are perfect substitutes	39
Figure 4. 14.	Individuals' estimated replacement costs	39
Figure 4. 15.	Community's estimated replacement costs and gender	40
Figure 4. 16.	Individuals' willingness to contribute to the restoration program	42
Figure 4. 17.	Individuals' estimated willingness to contribute to the restoration program	42
Figure 4. 18.	Response of the individuals on the presence of conservation measures	43
Figure 4. 19.	Diverse existing conservation measures	44
Figure 4. 20.	Individuals' support for the conservation measures	44

LIST OF PLATES

Plate 4. 1.	Making mats from the harvested papyrus.....	45
Plate 4. 2.	Exhibition of crafts from Kagango wetland products.....	46
Plate 4. 3.	Illegal burning of Kagango wetland.....	47
Plate 4. 4.	Pots made out of clay from Kagango wetland.....	48
Plate 4. 5.	Harvested papyrus bundles ready for sale.....	49
Plate 4. 6.	Kagango wetland edge crop farming.....	50
Plate 4. 7.	Uncovered ditches after clay and sand extraction.....	51
Plate 4. 8.	Solid waste disposed in Kagango wetland.....	52
Plate 4. 9.	Tree seed nurseries established in the edges of Kagango wetland.....	53

LIST OF TABLES

Table 4. 1.	Estimated value of Kagango wetland	41
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DEFINITION OF KEY TERMS.

Altruism value: The preference of the individual for others of the current generation to enjoy and benefit from a resource, even if the individual professing the value does not use the resource.

Bequest value: The preference of the individual for others of future generations to enjoy and benefit from a resource, even if the individual professing the value does not use the resource.

Direct Use Values (DUV): benefits derived from fish, agriculture, fuel wood, recreation, transport, wildlife harvesting, peat/energy, vegetable oils, dyes, fruits among others.

Economic value: can be defined as the most that a person is willing to give up in other goods and services in order to obtain a good, service, or state of the world.

Existence value: is the value of simply knowing that the resources or biodiversity within the wetland are protected.

Indirect Use Value (IUV): indirect benefits derived from the wetlands functions like nutrient retention, flood control, storm protection, groundwater recharge, micro-climatic stabilization.

Non-Use Value (NUV): derived from the knowledge that a resource (biodiversity, cultural heritage, religious site, and bequest) is maintained.

Option value: is the estimated future value of resources and services offered by the wetland such as possible medicinal, leisure, agricultural or industrial uses.

Replacement cost: is a method used to calculate the cost of replacing a service with a human-created product, such as fertilizers to replace the nutrients that worms create for the soils. This uses the costs of restoring ecosystem goods or services (e.g. through habitat restoration), or of replacing them with artificial substitutes.

Total Economic Value (TEV) is theoretically the sum of all the above values, although depending on how they are measured they may not always be additive ($TEV = DUV + IUV + NUV$).

ABSTRACT

Wetlands perform a number of ecosystem services and are well recognized internationally recognized as one of the most important ecosystems for the conservation of biodiversity. Kagango wetland directly and indirectly supports thousands of people, and provides goods and services namely fertile agricultural soils, wetland fish; wetland trees for timber and fuel wood and reeds to make mats and to thatch roofs. However, the wetland is being rapidly degraded through brick making, and art and craft which appear to yield much higher and more immediate profits.

The wetland is located in KITC Sheema District where a sample of 60 respondents was taken. The general objective was to determine the total economic value of Kagango wetland in its current state through finding out the reasons for encroachment, determining the current environmental and ecological benefits from the wetland accrued to different community activities conducted in Kagango sub-county and suggesting the best possible ways of conserving Kagango wetland. Questionnaires and interviews were used to gather data from wetland encroachers, local leaders, and 5 key informants from SDLG. The estimated monetary value for the different wetland benefits that accrue to the people who use this wetland was arrived at by using the replacement cost method.

Findings revealed that most individuals use the wetland either for papyrus harvesting, agriculture or brick making which are highly paying activities. Also the replacement cost value of Kagango wetland in its current state was estimated to be US \$ 3,827.3 per month. The replacement costs per month steadily increase as more people engage in Kagango wetland utilisation which jeopardises the future existence of the wetland. Therefore, this calls for promoting papyrus harvesting for mulching of crops grown outside the wetland to enhance output and incomes.

CHAPTER ONE:

1.0. INTRODUCTION

1.1. Background

1.1.1. What are wetlands?

Wetlands certainly occupy the transitional zones between permanently wet and generally dry environments. They share characteristics of both environments yet cannot be classified unambiguously as either aquatic or terrestrial. Wetlands differ widely in character due to regional and local differences in climate, soils, topography, hydrology, water chemistry, vegetation, and other factors (Gosselink et al, 1993). While all wetlands are characterized by impeded drainage, the length of their flooding period, depth of water, soil fertility and other environmental factors vary with different wetland types. They are home to distinctive plant and animal communities that are well adapted to the presence of water and flooding regimes.

According to the Ramsar Convention (1971) "wetlands are areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static, or flowing, fresh, brackish or salty, including areas of marine water that do not exceed 6 meters at low tide". Uganda's National Policy for the Conservation and Management of Wetland Resources (1994) define wetlands as areas "where plants and animals have become adapted to temporary or permanent flooding." It includes permanently flooded areas with papyrus or grass swamps, swamp forests or high-altitude mountain bogs, as well as seasonal flood plains and grasslands. The National Environment Act, Cap 153 under Section 2 defines wetlands as areas permanently or seasonally flooded by water where plants and animals have become adapted.

1.1.2. Global Wetland distribution

Wetlands are valuable ecosystems that occupy about 6% of the world's land surface. They comprise both land ecosystems that are strongly influenced by water, and aquatic ecosystems

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