



**BUSITEMA UNIVERSITY**

**FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES  
DEPARTMENT OF NATURAL RESOURCE ECONOMICS**

**THE ECONOMIC VALUATION OF SURFACE WATER RESOURCES IN  
FORTPORTAL MUNICIPALITY KABAROLE DISTRICT-A CASE OF RIVER  
MPANGA**

**BY**

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BU/UG/2015/63**

**A RESEARCH REPORT SUBMITTED TO THE FACULTY OF NATURAL  
RESOURCES AND ENVIRONMENTAL SCIENCES IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR  
OF SCIENCE IN NATURAL RESOURCE ECONOMICS OF BUSITEMA  
UNIVERSITY**

**JUNE 2018**

***DECLARATION***

I **HAPPY EDWARD** declare that this Research report has been from my own efforts and to the best of my knowledge it has never been submitted to any institution of high learning for the award of a Degree or other qualification

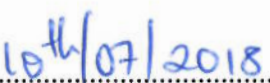
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***APPROVAL***

I hereby certify that this research report titled “The economic valuation of Surface water resources in Fort portal municipality Kabarole District” by Happy Edward has been done under my supervision and it is ready to be submitted to the Faculty of Natural resources and Environmental sciences Busitema University.

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## ***DEDICATION***

I dedicate this work to the one and only Mum Mrs. Kabajungu Jane For the tremendous support provided financially, Moral mentorship, Prayers and other support May the Almighty God bless you Mum and make you live for Long on this Earth To enjoy the fruits from your proud son.

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## *LIST OF ACRONYMS*

CV	Contingent Valuation
FAO	Food and Agriculture Organisation
FMER	Fort portal Municipality Environmental Report
HP	Hedonic Pricing
IPCC	Inter-governmental panel on climate change
KDLG	Kabarole District Local Government
MLWE	Ministry of Land, Water and Environment
MEA	Millennium Ecosystem Assessment
NWDR	National water resources development research
NWSC	National water and Sewerage Corporation
T.C.M	Travel cost method
UNICEF	United Nations Children's Emergency Fund
UBOS	Uganda National bureau of statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UWI	Global water Intelligence
WTP	Willingness to pay
WRMD	Water Resources Management Department
W.H.O	World Health Organisation

## ***ABSTRACT***

This study was conducted on the communities surrounding River Mpanga in Fort Portal Municipality, Kabarole district. The purpose of the study was to assess the economic value of River Mpanga as a surface water resource in Kabarole district. The specific objectives were to: find out the human activities conducted around river Mpanga; examine the impacts of various human activities on the River Mpanga ecosystem and attach monetary value to the benefits obtained from River Mpanga.

The study employed a descriptive research design and used both qualitative and quantitative approaches. Primary data was collected using questionnaires, interviews of key resource persons and observations. Secondary data was collected by reviewing district environmental reports, district statistical abstracts, district action plans, journals, and other sources of literature. Data was coded, entered and analyzed using Statistical Packages for Social Sciences (SPSS) version 20 to give descriptive and inferential statistics. Inferential statistics include chi-square tests. A total sample of 90 respondents was considered of which 41 were females and 49 were males.

Findings showed the local communities surrounding River Mpanga carried out farming, nursery bed operations, brick making, and sand mining as livelihood activities. Also River Mpanga was the main source of water for domestic, commercial and industrial use in Fort-Portal municipality. Over 82 percent of the respondents in the study area were willing to pay for the recovery and conservation of River Mpanga. However, low monetary value was attached to the benefits from River Mpanga.

It is concluded that although River Mpanga is essential for the well-being of local communities, it has generally reduced in size and water quality due to increased encroachment on river banks, dumping of wastes and farming. It is therefore recommended that the local communities be sensitized on policies and legislation for the conservation of River Mpanga, on the value attached to the benefits from River Mpanga, gazetting and demarcation of the river boundaries, enforcement of the 100m buffer from the river and sensitized on the river use rights.

# CHAPTER ONE: INTRODUCTION

## 1.1 Introduction

This chapter encompasses the background of the study, problem statement, objectives, research questions, conceptual framework, significance, justification and scope of the study.

## 1.2 Background to the study

River Mpanga starts from Karangura hills in the Rwenzori Mountains. It passes through Fort-Portal town, the districts of Bunyangabu, Kyenjojo and Kamwenge and pours into Lake George (Et.al water journalists.com). It is the major source of water for Fort-Portal town and the neighbouring communities. It supports the livelihoods of the local communities such as farming and commercial activities (KDLG, 2014). The NWSC pumps water from the river for domestic use of more than 54,275 residents in the municipality (Muramuzi, 2016; NPHC, 2014).

However, human activities along the river banks are threatening the flow of River Mpanga (Kajubu, 2009). Forestry and river sediment extraction in the catchment area may be providing economic advantages, but affect the water quality, flora and fauna downstream and since the river flows into Lake George, the state of Mpanga is also contributing to the quality of the lake and its fish stock, (Mpanga report, 2016).

These people have violated the NEMA 2000 regulation of leaving 100 m buffer zone along the river. For example, at Kazingo in Karangura Sub County, the local communities have cultivated food crops on the river banks causing its silting. In Fort-Portal town, people was vehicles 20 metres from the river banks spilling oil products contaminating water consumed by residents of the municipality. The tree buffers along the river banks in Kamwenge have been cut (Kajubu, 2009). Because of this pollution, NWSC Fort-Portal plant spends lots of money to filter the polluted water from River Mpanga (Muramuzi, 2016). Furthermore, residents of Fort-Portal municipality dump garbage directly into the river and this waste material is carried downstream. This has many times contributed to the bursting of its river banks. The situation is further worsened by the many houses constructed along the river banks (Ashaba, 2017). All this puts the local communities living along the river banks at risk from diseases and destruction of aquatic systems.

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