



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

**PAYMENT FOR ECOSYSTEM SERVICES: A CASE STUDY OF WATERSHED  
PROTECTION IN LAKE NAKUWA WETLAND, KALIRO DISTRICT**

**BY**

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## DECLARATION


I Kato Paul hereby declare that this dissertation is my own work and has never been submitted to any institution of higher learning for any award.

Signature.....

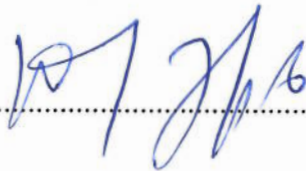
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**APPROVAL**

This dissertation has been done and completed under my supervision

Signature.....

Masaba Sowedi (Supervisor)

Date.....



## DEDICATION

I dedicate this piece of work to my father Mr. Kankya Christopher, Mother Mrs. Businge K Morrine, my friend Kibira Walliyah, Brothers and Sisters and to the rest of my friends. Almighty God blesses you abundantly.

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## LIST OF ACRONYMS/ABBREVIATIONS

CBOs	Community Based Organizations
CVM	Contingent Valuation Method
CWMP	Community wetland Management Programme
ES	Ecosystem Services
NEMA	National Environmental Management Authority
NGOs	Non-Government Organizations
PES	Payments for Ecosystem Services
SDGs	Sustainable development Goals
SPSS	Statistical Package for Social Sciences
UBOS	Uganda Bureau of Statistics
UNEP	United Nations Environmental Programme
WTA	Willingness to Accept
WTP	Willingness to Pay
IBAs	Important Birds Areas

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## ABSTRACT

The study analyzed the suitability of payment for ecosystem services for Lake Nakuwa watershed protection in Kaliro District. The specific objectives were to estimate the community's willingness to participate in PES, willingness to pay and willingness to accept compensation for Lake Nakuwa watershed protection. The study adopted a survey research design. Primary data were collected using questionnaires. Data collected were managed using MS EXCEL and SPSS. Data was analyzed using descriptive statistics and regression to determine the factors influencing the local community's willingness to participate in PES, WTP and WTA compensation for watershed protection. The study findings revealed that 88.6% of respondents were willing to participate in PES scheme as a community, 51.4% were willing to pay for watersheds protection and 74.3% were willing to accept compensation for watershed protection. The study further revealed the mean WTA as 706,896.6 Uganda shillings and the total WTA of 4,519,755,481 Uganda shillings obtained through multiplying the mean WTA with number of households (6,393.8) in upstream area. Given as total WTA= (706,896.6 \* 6,393.8). The findings also revealed the mean WTP as 5,892.9 Uganda shillings with the total WTP of 67, 276,882 Uganda shillings obtained through multiplying the mean WTP with number of household (11,416.6) in upstream area. Given as total WTP= (5,892.9 \* 11,416.6).

The study concludes that local communities are willing to protect the Lake Nakuwa watershed. The study recommends that public awareness about watershed management should be undertaken.

**Key words:** *Lake Nakuwa, watershed protection, CVM, WTP and WTA.*

## CHAPTER ONE

### GENERAL INTRODUCTION

#### 1.0 Introduction

This chapter discusses the background to the study, problem statement, objectives, research questions and conceptual framework.

#### 1.1 Background of the study

Sandra et al., (2005) defined a watershed as an area of land that drains into a common water source. Because watersheds connect and encompass terrestrial, freshwater, and coastal ecosystems, they perform a wide variety of valuable services, including the supply and purification of fresh water, the provision of habitat that safeguards fisheries and biological diversity, the sequestering of carbon that helps mitigate climatic change, and the support of recreation and tourism. In the parlance of ecological economics, watersheds are natural assets that deliver a stream of goods and services to society.

Osborn., Cutter & Ullah. (2005) highlighted the need to achieve the Sustainable Development Goals (SDGs) that relate to the insurance of availability and sustainable management of water and sanitation for all through protecting and restoring water-related ecosystems including wetlands, rivers, aquifers and lakes. 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 neighbouring local communities. Crop farming activities and other forms of poor land use practices such as

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