BUSITEMA UNIVERSITY

FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES

ASSESSING THE EXISTING WATER RESOURCE MANAGEMENT STRATEGIES FOR MITI GATING FLOODING ALONG RIVER NYAMWAMBA IN KASESE MUNICIPALITY, KASESE DISTRICT

BY

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A RESEARCH REPORT SUBMITTED TO THE FACULTY OF NATURAL RESOURCES AND ENVIRONMENTAL SCIENCES IN PARTIAL FULLFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE IN BACHELORS OF SCIENCE IN NATURAL RESOURCE ECON OMICS OF BUSITEMA UNIVERSITY.

SEPTEMBER, 2024

DECLARATION

I **BWAMBALE BRIAN KATHINA**, solemnly declare and affirm that the creation and production of this work has been by the combined effort and has never been presented to any institution of higher learning for any academic / research award.

BWAMBALE BRIAN KATHINA **DATE**

BU/UP/2021/0444

APPROVAL

This report has been submitted following a comprehensive and holistic assessment as a true copy for consideration by our university supervisor.

Ms. ARIANGO ESTHER. **Date**

(SUPERVISOR)

DEDICATION

This work is dedicated to everyone who has supported me in my academic journey more especially my parents; Mr. Maate Abel Kabanghi and Mrs. Nyangoma Florence, my siblin gs, well wishers as well as my friends and course mates who were always there when I n eeded help throughout this journey.

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In addition, I would like to greatly thank my family and relatives, especially my parents M r. Maate Abel Kabanghi and Mrs. Nyangoma Florence for the financial assistance and al ways supporting, encouraging and never giving up on me. All this parental care and guid ance enabled me to successfully complete my studies. Also, my siblings and relatives w ho have always prayed for me and also gave in their full support to parents to sell off so me assets we had to cater for my studies. GOD BLESSES YOU ALL!

Furthermore, I extend my sincere gratitude to my dear supervisor Ms. Ariango Esther, for her guidance and words of encouragement in the successful development of this researc h report. Also, not forgetting the tireless efforts of the entire academic staff that provided us with knowledge and did not give up on us.

Lastly, my appreciation also goes to my fellow course mates for they have played a vital role in my success as we walked this journey as a family and did not leave me behind. M ay the Almighty God reward them abundantly?

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NRE	Natural Resource Economics
KDLG	Kasese District Local Government
KMC	Kasese Municipal Council
MoWE	Ministry of Water and Environment
WWF	World Wildlife Fund for Nature
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resource Management
FAO	Food and Agricultural Organization
UBOS	Uganda Bureau of Statistics
UNHS	Uganda National Household Survey
UN	United Nations
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries

ABSTRACT

This study assessed the Existing Water Resource Management Strategies for Mitigating Flooding along River Nyamwamba in Kasese Municipality, Kasese District. The following objectives guided the study: i) to identify the existing Water Resource Management strategies implemented for mitigating flooding along River Nyamwamba in Kasese Municipality, ii) to identify the challenges of the existing Water Resource Management strategies for mitigating flooding along River Nyamwamba in Kasese Municipality, iii) to examine the perceptions of local communities towards the existing water resource management strategies for mitigating flooding along River Nyamwamba in Kasese Municipality.

A mixed-methods research design was used for this study. This design combined both qualitative and quantitative research methods to provide a comprehensive understanding of the existing Water Resources Management strategies for flood mitigation along River Nyamwamba in Kasese Municipality. The qualitative component allowed an in-depth exploration of stakeholders' perspectives, experiences, and perceptions, while the quantitative component provided empirical data on flood characteristics, hydrological parameters, and the effectiveness of management strategies. A total sample of 650 respondents was reached for the information with a random of 50 respondents each from different households from well-known areas that have occasionally been hit by floods in all the three divisions of the municipality. The study used simple random and purposive sampling to select the participants. Questionnaire, interview guide and observation methods were used to collect data. Data was collected from different villages and underwent different processing stages of editing, organizing and coding. And later analysed using the Statistical Package for Social Scientists (SPSS) version 21 for easy interpretation of the findings.

The study found out that there was conflict / limited acceptance of some government projects in Kasese Municipality for fear of government grabbing their land. Whenever, government tried to plant Bamboo along the river banks to contain flood waters, the local natives up-rooted them. Community members were anxious that the government had plans of evicting them from their settlement and they were also suspicious of losing their properties to government to have come up with a strategy to fight massive flooding and help the community as result there was limited acceptance some government projects in Kasese Municipality for fear of government grabbing their land.

CHAPTER ONE

1.0 INTRODUCTION

This chapter in this research majorly presents the introduction of the study, background of the study, problem statement, and purpose of the study, specific objectives, and research questions, scope of the study, significance of the study and definition of operational terms.

1.1 Background of the Study

A water resource refers to any of the entire range of natural water stocks that occur on Earth, regardless of their state (i.e., vapour, liquid, or solid), and that are of potential use to humans' wellbeing, ecosystem services, economic development, and the maintenance of biodiversity with ecological integrity (UNESCO/IHP, 2011). These resources include the waters of the seas, oceans, rivers, lakes, and underground waters found in the top layers of the earth's crust and soil cover (Britannica, 2024). Current estimates are that the earth's hydrosphere contains about 1386 million cubic kilometres of water. However, 97.5% of this amount is saline waters, and only 2.5% is fresh water. The greater portion of this fresh water (68.7%) is in the form of ice and permanent snow cover in the Antarctic, the Arctic, and in the mountainous regions. 29.9% exists as fresh groundwater, and only 0.26% of the total amount of fresh waters on the Earth are concentrated in lakes, reservoirs and river systems where they are most easily accessible for our economic needs and absolutely vital for water ecosystems, hence making fresh water very scarce for humans. (Shiklomanov, 1998)

Water Resource Management (WRM) is the process of formulating and implementing plans, policies, and strategies to effectively and efficiently manage water resources at the local, regional, and national levels (Stockholm, 2009). It includes treatment of drinking water and industrial water, management of flood protection and discharges, and management of irrigation, and the water table (Rickson, 2009). However, it is likely that ongoing climate change will lead to situations that have not been encountered and as a result, alternative management strategies, including participatory approaches and adaptive capacity are increasingly being used to strengthen Water Resource Management decision making (George Tsakiris, 1987). Furthermore, climate change is redistributing where water is rare and where it is plentiful making some regions more prone to drought conditions where as other regions hit by frequent flooding hence making Management of Water Resources increasingly important (Troy Adams, 2021).

Floods are in recent times being experienced with increased frequency and devastating i