
**EFFECTIVENESS OF COMMUNITY BASED WETLAND
MANAGEMENT APPROACHES IN A CHANGING ENVIRONMENT
OF SOUTH KIRURUMA WETLAND, KABALE DISTRICT, UGANDA**

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DECLARATION

I, **Ariyo Benjamin** declare that this research dissertation is my original work, except where due acknowledgement has been made. I declare that this work has never been submitted to this university or any other institution for funding or fulfilment for any award.



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APPROVAL

This research dissertation is submitted as a partial fulfilment for the award of Masters of Science in Climate change and disaster management (MCC) of Busitema University, with our approval as the academic supervisors.

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DEDICATION

I dedicate this work to my family and all friends whose tireless efforts gave a firm background to my academic path up to this level and particularly my family who withstood hard times because of my decision to pursue further studies.

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LIST OF ACRONYMS

CBWMA	: Community Based Wetland Management Approaches
EIA	: Environmental Impact Assessment
FAO	: Food and Agriculture Organization of the United Nations
INRM	: Integrated Natural Resources Management
IPCC	: Intergovernmental Panel on Climate Change
IUCN	: International Union for Conservation of Nature
MoFPED	: Ministry of Finance, Planning and Economic Development
MWE	: Ministry of Water and Environment
NEA	: National Environmental act
NEMA	: National Environment Management Authority
RAMCEA	: Ramsar Center for East Africa
UBOS	: Uganda Bureau of Statistics
WMD	: Wetland Management Department

ABSTRACT

Despite provision of ecosystem services to over 80% of Ugandans, which contributes to household income and food security especially for rural communities, to date, wetlands continue to undergo degradation. This's attributed to weaknesses in the existing wetlands management approaches in terms of legislation and political will due to non-participation by the local people in policy formulation and implementation. This study aimed to examine the effectiveness of Community Based Wetland Management Approaches in a changing environment in South Kiruruma Wetland, Kabale District. The objectives of the study were to: i) assess changes in the ecological composition of South Kiruruma wetland, ii) examine resource uses and management issues in South Kiruruma wetland and, iii) establish the better sustainable management options of South Kiruruma wetland.

The study employed a mixed methodology approach i.e. qualitative and quantitative data collection techniques. The quantitative approach involved a survey of 400 household's selected using systematic sampling method, whereas the qualitative approach involved seven Focus Group Discussions and six key informant interviews. The physico-chemical characteristics of South Kiruruma wetland were determined through laboratory analysis of the water PH, Temperature, Electrical conductivity (EC), Total Suspended Solids (TSS), Dissolved Oxygen (DO), Nitrate-Nitrogen, Chemical Oxygen Demand (COD), soluble reactive phosphorous (SRP) and *Escherichia coli* as a microbial indicator of water quality.

Results revealed that the major wetland plant species were *Cyperus papyrus* and *Typha spp* whereas the major fauna that exist currently in the wetland are various fish species, bird species, some mammals, reptiles, amphibians and insects. While most physico-chemical water quality parameters were within the recommended limits for portable water use, TSS and *E. coli* concentrations exceeded the World Health Organization guidelines for portable water use. The major wetland resource uses were: crop cultivation, animal grazing, medicine, water for domestic use, source of craft and house construction materials and other non-use values like modulation of climate and flood control. Suitable wetland management approaches were establishment of laws, relocations of households living within the wetland with compensation, creation of alternative livelihoods and implementation of wetland restoration activities. The major issues hindering wetland management were community negative mindset and ignorance, limited land for agriculture, lack of alternative livelihoods, and political interferences among others. These issues were attributed to increase in human population hence a requirement for industrial and agricultural development and climate change effects. Whereas South Kiruruma wetland offers a range of ecosystem services to the nearby community, the ecological and physico-chemical characteristics for South Kiruruma wetland clearly indicate that the wetland is threatened due to severe degraded. The study recommends increase in mass sensitization of community through trainings on sustainable wetlands use, provision of alternative livelihood sources for the wetland dependent community and implementation of a robust but yet sustainable wetland restoration program to safeguard South Kiruruma wetland complex.

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