INSTITUTIONAL AND LEGAL FACTORS AFFECTING THE EFFECTIVE MANAGEMENT OF WETLAND RESOURCES IN A DECENTRALIZED SYSTEM OF GOVERNANCE: A CASE STUDY OF MBARARA DISTRICT

BY

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DECLARATION

I, Bernard Arinaitwe Mbasa, declare that the work presented in this dissertation is entirely my original work except in cases where other scholars are cited and that it has never been submitted elsewhere for any academic award or any other purpose.

Signed……..

Date……..

APPROVAL

This dissertation is submitted to Uganda Management Institute, Higher Degrees Department for examination with our approval as supervisors.

Sign……...……Date……

Dr. Wilberforce Turyasingura

1st Supervisor

Sign……..Date…….

Mr. Michael Kiwanuka

2nd Supervisor

DEDICATION

I dedicate this work to my dear wife, Mable Ntarimu, my sons; Lenin Aaron Arinaitwe and Stalin Ethan Arinaitwe, who endured long period of my absence from home while I concentrated to produce this piece of work. Of course, this required financial resources as well which were spent at the expense of my young and growing family. Bravo

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I will forever be indebted to the staff of Mbarara District Local Government particularly members of technical planning committee, natural resources department personnel and sub county technical staff who participated in this study for their valuable time input and honest contribution that has made it possible for me to complete this piece of work. The contribution of political fraternity of Mbarara district headed by District secretary for Environment and production cannot be underrated as their opinions during interviews and FGDs at village levels with Local council ones executives greatly shaped this piece of research work.

Sincere appreciation goes to my greater family; my mum, my siblings, my wife and my children who have been a source of inspiration and encouragement throughout my academic life. I am also indebted to my friends particularly at post graduate diploma level; Moses, Ruth, Charles and Winnie who uplifted my spirits whenever things got tough. Lastly my thanks to the entire UMI management and staff who provided a conducive study environment that has enabled successful completion of this course.

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ABBREVIATIONS

BTC	Belgian Technical Cooperation
CBWMP	Community-Based Wetland Management Plan
DEC	District Environment Committee
DEO	District Environment Officer
DNRO	district natural Resources Officer
DTPC	District Technical Planning Committee
DWO	District Wetland Officer
EIA	Environmental Impact Assessment
ENR	Environment and Natural Resource
FY	Financial Year
GoU	Government of Uganda
HDD	Higher degrees department of UMI
LEC	Local Environment Committee
LG	Local Government
MISR:	Makerere Institute of Social Research
MNR	Ministry of Natural Resources
MWE	Ministry of water and environment
NEA	National Environment Act
NEMA	National Environmental Management Authority
NRM	Natural Resource Management
PAF	Poverty Action Fund
UBOS	Uganda Bureau of Statistics
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Program
WID	Wetlands Inspection Division
WMD	Wetland Management Department
WSSP	Wetland Sector Strategic Plan

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ABSTRACT

The study investigated the institutional and legal factors affecting effective management of wetland resources in a decentralized system of governance in Uganda. It was conducted in Mbarara district and the objectives were:- to establish the effect of institutional funding on effective wetland management in a decentralized system of governance in Uganda; to examine the effect of institutional human resource on effective wetland management in a decentralized system of governance in Uganda; and to assess the effect of the existing laws on the effective management of wetlands in a decentralized system of governance in Uganda.

In the study, both qualitative and quantitative methods of data collection and analysis were used based on a case study design. Data was collected using questionnaires, interviews, FGDs and documentary reviews and was subsequently analyzed using frequencies, percentages and correlation coefficient with the help of SPSS, version 16. Qualitative data were analyzed by thematic and deductive techniques.

It was found out that all variables had moderate relationship with effective management of wetland resources with slight variations in strength. The above findings were as well backed by the expressions of various stakeholders interfaced with during the study through FGDs and interviews.

There is therefore a need for efficient planning and budgeting mechanism at district levels with wetland resources key on the priority list; recruitment the required personnel to handle day today management of wetland resources both at the district and lower local government levels and a need to streamline existing legal framework for wetland management with efforts put at formulating a national wetland specific law and local governments wetland ordinances and byelaws that would go a long way in enhancing sustainable management of wetlands resources in the country

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study aimed at examining the relationship between institutional and legal factors and the effective management of wetlands resources in a decentralized system of governance in Uganda. The study was conducted in Mbarara district and particularly focused on the established structures in the district especially local council committees (LCI-V), District and Local environment committees and district technical planning committee members.

This chapter therefore presents the background to study, statement of the problem, purpose of the study, specific objectives of the study, research questions, the hypothesis, conceptual framework, significance of the study, justification, scope of the study and operational definitions of the terms used in the study.

1.1 Background to the Study

MWLE (1999) defines natural resources management as efforts by the states aimed at efficient utilization of God given resources for enhanced economic development. Effective wetland resources management is thus the process of promoting sustainable use of wetland resources including water, flora and fauna to meet the present needs without compromising their ability to satisfy the needs and aspirations of future generations. These needs and aspirations are expressed in a complex chain of rules, policies and institutions that constitute an organizational mechanism through which both the broad objectives and specific planning target of natural resource management must be articulated (Mugabe and Tumushabe, 1999).

Uganda's National Policy for the Conservation and Management of Wetland Resources (1994) defines 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 floodplains and grasslands. 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. Wetlands are home to distinctive plant and animal communities that are well adapted to the presence of water and flooding regimes (MNR, 1995).

Wetlands are ecosystems that occupy about 6% of the world's land surface, (Mitsch and Gosselink, 1997). They comprise both land ecosystems that are strongly influenced by water and aquatic ecosystems with special characteristics due to shallowness and proximity to land. Although various different classifications of wetlands exist, a useful approach is one provided by Ramsar (1971) convention on wetlands. It divides wetlands into three main categories of wetland habitats namely: marine or coastal wetlands, inland wetlands and man-made wetlands.

Data on the extent and distribution of wetlands at various scales, from global estimates to the areal extent of particular wetland types at specific sites, is inconsistent in some sites or countries. Based on current information therefore, it is not possible to provide an acceptable figure of the real extent of wetlands at a global scale. Firstly, there is little agreement on what constitutes a wetland. Secondly, there are many gaps and inaccuracies in the information. Thus, the 'best' minimum global estimates provided below are indicative only: natural freshwater wetlands 570,000,000ha; rice paddy 13, 0000, 000ha; mangroves 18,100,000ha; coral reefs 30-60,000,000ha. On these figures the area of wetlands worldwide ranges from 748,100,000-778,100,000 ha, but this does not include many wetland types, such as salt marshes and coastal flats, seagrass meadows, karsts and caves, and reservoirs (Global Review of Wetland Resources and Priorities for Wetland Inventory, Summary Report).

Globally, wetlands have important values both to the human beings and to the ecosystem. Wetlands are useful in ground water recharge and discharge, flood control, sedimentation or nutrient and toxicant retention, biomass export, recreation or tourism, storm prevention or wind break, micro climate stabilization and water transport (Dugan, 1990, Apunyo, 2006). In addition, they are a source of various forms of resources including forest resources, wildlife, fisheries, forage, agriculture, and water supply. Wetlands also provide essential habitat for species of birds and mammals that are hunted, and this gives them economic value. Further, they are a source of biological diversity and a source of culture or heritage. Despite the vital values of wetlands, wetlands degradation seems to be on the increase. The major threats to wetlands have been drainage, settlements, industrialization, pollution, ground water abstraction, siltation, burning and over harvesting (WID, 2000).

Outside Western Europe and North America there is very little information available or attempt made to calculate wetland loss on a systematic basis. The loss of wetlands worldwide has been estimated at 50% of those that existed in 1900, a figure that includes inland wetlands and possibly mangroves, but not large estuaries and marine wetlands such as reefs and seagrasses. Much of this loss occurred in the northern temperate zone during the first half of this century. However, since the 1950s tropical and sub-tropical wetlands, particularly swamp forests and mangroves, have increasingly been lost (Global review of wetland resources and priorities for wetland inventory, Summary Report). In Africa, Hamilton (1998), notes that some wetland areas are experiencing immense pressure from human activities, the most important being drainage for agriculture and settlement, excessive exploitation by local communities and improperly planned development activities.

The first attempts of decentralization started decades ago in Asia in the 1950s and in Africa in the 1960s. Efforts had been made to have participation of local communities in development. However, interference and distrust from central government bodies and a lack of resources and knowledge in the local communities caused most of these projects to fail (Crook and Manor, 1998). Despite this failure,

decentralization of governance as a tool for political and economic development in developing countries gained popularity again in the 1980s (Agrawal and Ribot, 1999; Wunsch, 2001).

The precise definition of decentralization and the best model for its implementation though remains unclear. Several concepts (de concentration, delegation, and devolution (Dressler, 2006) have been used to describe the various approaches implemented in different countries, to explain their respective successes and failures, and to identify the most promising model. Because of the different conceptual frameworks applied, this debate has not produced a shared ideal model of decentralization.

Decentralization of natural resource management is considered by many; development agents, researchers and environmentalists, as a way to improve efficiency and equity in natural resource management (Ribot, 2002). Environmental resources are most of the time crucial for the livelihoods of people in developing countries (Larson and Ribot, 2004). Many depend on natural resources for food, income generating activities or protection. With the decentralization reforms that many developing countries have implemented, the management of natural resources has been decentralized in many developing countries as well. Decentralization reforms in natural resource management affect people in ways of access to, use and management of natural resources and influence their perception and way of expressing concerns towards natural resources. Because many people depend on natural resources it is important for them to have a voice in the management and decisions over the natural resources they depend on (Ribot, 2002).

The decentralization of natural resource management in Africa is located at the intersection among good governance and democracy, development and poverty alleviation, and community-based resource management and local resource rights. Many environmentalists consider the local community to be the most appropriate custodian of environmental management since them “are better able to understand

and intervene in environmental problems because they are 'closer' to both the problem and the solution" (Lane and McDonald 2005: 710).

In Africa, as UNEP (2002) claims, natural resources have been woven into the daily lives of many people. Particular traditional and cultural values among the diverse communities across the continent have guided the way people interact with their environment and how natural resources are used and managed. In many sub regions, the people's relationship with natural resources remains strong, and traditional regulatory mechanisms are still in place that facilitate sensible resource use and conservation. Environmentalists often draw attention to these traditions to promote decentralization in sub-Saharan Africa (Woodhouse, 1997). Decentralized environmental and natural resource management would allow local communities to be actively involved and to address their main environmental problems in ways that suit their local needs (Agrawal and Gibson, 1999). Some observers regard the decentralization of natural resource management including wetlands as even an "institutionalized form of community participation" (Ribot, 2002).

Uganda initiated efforts to strengthen local governments in the 1980s and the decentralization of natural resource management was included in a later stage of this process. The country's policy of decentralization is officially focused on empowering local populations via democratization, participation, accountability, responsibility, efficiency, and effectiveness (Nsibambi 1998). Institutionally, decentralization in Uganda is built on a hierarchical structure of local councils (LCs) that stretches from the village (LC1) through the parish (LC2), the sub county (LC3), the county (LC4), and the district (LC5). These LCs have all been empowered through decentralization but the process has particularly affected the district and the sub-county levels; these levels are considered to be a part of local government, while the other levels are simply administrative units. The main political and

administrative powers at the local level are vested in the district (LC5) and the governing body of the district is also directly elected by the population.

When the local governments were initially formalized in 1993, decentralization was seen not as a means of democratizing power over natural resource management but as a means of increasing revenue, promoting local development, and improving the effectiveness and legitimacy of the state. Decentralization was initiated by the National Resistance Movement leadership but pressure from international donors further accelerated the process. National authorities yielded to this pressure because they needed international recognition and financial support (Wetaaka, 2007). It was only later those environmental issues entered this realm, again mainly due to pressure from foreign donors, including the World Bank. These international donors made decentralization a condition for the release of grants or loans to implement certain environment-related programs (Bazaara 2003).
These donors justified their interference with the claim that

> *"user-based natural resource management is the most reliable, cost-effective and sustainable method for as long as the population is adequately educated and made aware of the importance and potential wealth of natural resources"* (Odwedo, 1995: 2).

The above approach was designed to shift responsibility for natural resource management including wetlands away from the central government so that local authorities and communities would not only be seen as conduits for the implementation of national regulations. Decentralization thus not only shifted the responsibility for environmental planning and management to the districts but also was intended to ensure the presence of participatory planning and decision-making, transparency, accountability, and sustainability in the entire development process; this process became known as the "mainstreaming" of environmental and natural resource management (Odwedo, 1995).

The decentralization of natural resource management in Uganda effectively started in the late 1990s and took different forms. First, the central government delegated the coordination, monitoring and supervision of all activities related to the environment to a semi-autonomous executive agency, NEMA. Second, the government privatized some key aspects of environmental regulation. These mainly concerned the execution of environmental impact assessments and studies, which were undertaken by developers themselves or by private consulting firms hired by these developers. Third, the central government delegated to local governments and communities the duty to manage the environment in their respective areas of jurisdiction. This last element appears to have been a largely unilateral decision made by the central government. Initially, the decentralization of environmental and natural resource management occurred through the selection of a limited number of focal districts. These districts received extensive training and support from NEMA that allowed them to experiment and show other districts how decentralized environmental management could work in practice. These first districts were later followed by others and all districts are now expected to include the protection of the environment in their development plans and to recruit a qualified person as the District Environmental Officer (Oosterveer et al, 2010).

In spite of government's efforts to decentralize the management of natural resources and particularly wetland management, a number of problems seem to be still unresolved. For example, under the current system, central and local governments do not always agree on who should play which role, why, and how (Oosterveer et al, 2010). The country seems to have a decentralized environmental management configuration drawn by the central authorities and handed over to the different districts for implementation and execution. Various responsibilities, including environmental management, are devolved by the center and imposed in a unilateral manner on the local governments and communities, many of whom remain reluctant to perform these tasks. The decentralization of environmental policy

in Uganda therefore cannot be considered equal to "participatory" environmental governance (Oosterveer et al, 2010). This District Environment or Wetland officer is the key local officer in charge of a large number of tasks in natural resource and environmental management at the district level.

Besides, there are institutional and legal factors such as human resource, funding and legal frameworks that continue to undermine the effective decentralized management of wetland resources in Uganda and this inevitably compromises the paradigm of sustainable development. Pollution of lakes and river systems continues unabated. Recent estimates indicate that more than 7% of the original wetland area in Uganda has been converted to other land uses (UBOS, 1999). The State of the Wetlands Report, 2010 indicate a 5% loss from 16% coverage in 1994 to 11% coverage in 2008. This has resulted in loss of biodiversity, especially for species that thrive or breed in wetlands. This shows that there are many legal, financial and human resource challenges affecting wetland management that this study intends to unearth.

1.2 Statement of the Problem

Wetlands cover 30,105km^2 of Uganda's total land area of 241,500km^2. With the coverage of 13% of the total land area, they represent one of the most vital ecological and economic resources the country is endowed with (Apunyo, 2006). They provide ecological services such as climate modification, water purification, waste water treatment, flood control and water storage and distribution in space and time and have direct uses like source of water for domestic and livestock, source of fish, medicinal plants and animals, and various materials. The overall economic value of wetlands in Uganda has not yet been quantified. Emerton et al, (1999), estimates the purification function of the 5km^2 Nakivubo wetland in Kampala at US$1.3 million per year. Papyrus harvesting and mat making in rural wetlands in Eastern Uganda contribute US$ 200 per year per family's income (IUCN, 2005).

As a result of decentralization of natural resource management in Uganda, very important steps have been made in delegating certain tasks to the district authorities and in creating the local capacity to implement them. Over the years, an elaborate institutional framework for decentralized environmental/wetland management has been developed. Most districts now have environmental or wetland officers charged with day to day management of wetlands, various laws have been put in place including the 1995 constitution, the National Environment Act (1995), the Land Act 1998, Local Government Act 1997 among others and funding mechanisms for wetland management both at the Central and Local Governments have been established.

In spite of these efforts by government aimed at enhancing decentralized natural resources management, there are still a number of factors affecting effective wetland management in Uganda and as such, the benefits envisaged from decentralization are still farfetched. In many districts the District Environment Committees and Local Environment Committees are nonexistent or do not function well (Oosterveer et al, 2010). Further, the effective policy development and implementation of natural resource management are hampered by the lack of financial and human resources at the local level. Central Government allocations towards wetlands management in districts continue to cripple down, natural resource management is not among the priority sectors at the district level to access local revenue share, most districts lack substantive and skilled personnel responsible for wetlands management and most of the laws and policies in place have made protection of the environment/wetlands difficult because of their conflicting nature. It was against these anomalies that this study aimed at exploring possible institutional and legal factors affecting the management of wetland resources in the decentralized system of governance focusing on Mbarara district as a case study.

1.3 Purpose of the Study

The purpose of the study was to examine the effect of institutional and legal factors on the effective management of wetland resources in a decentralized system of governance in Uganda with specific reference to Mbarara district.

1.4 Objectives of the Study

The study was premised on the following objectives:-

i. To establish the effect of funding on effective wetland management in a decentralized system of governance in Uganda.
ii. To examine the effect of human resource on effective wetland management in a decentralized system of governance in Uganda
iii. To assess the effect of the existing laws on the effective management of wetlands in a decentralized system of governance in Uganda.

1.5 Research Questions

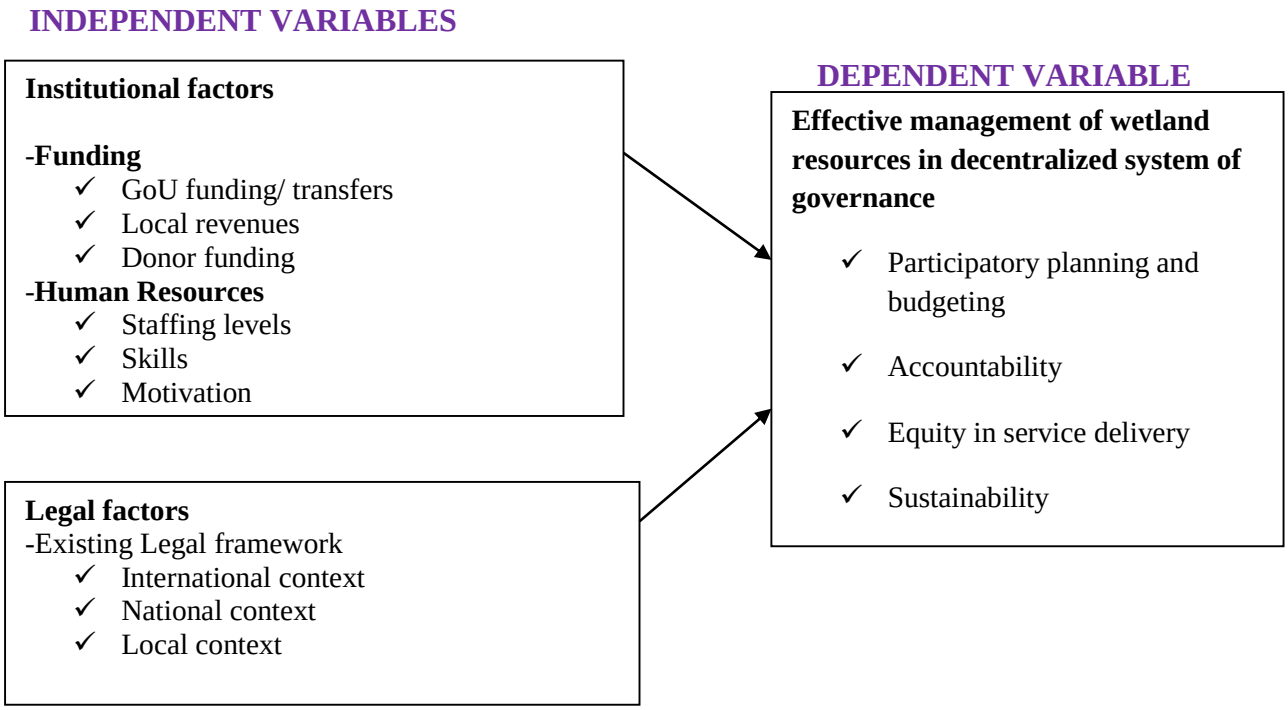
i. What is the effect of funding on the effective management of wetlands in a decentralized system of governance in Uganda?
ii. How does the human resource affect the effective management of wetlands in a decentralized system of governance in Uganda?
iii. To what extent does the existing legal framework affect effective wetland management in a decentralized setting in Uganda?

1.6. Hypotheses of the Study

i. Funding greatly affects the effective management of wetlands in a decentralized system of governance in Uganda.
ii. Human resource does not affect the effective management of wetlands in a decentralized system of governance in Uganda.

iii. The existing legal framework affects effective wetland management in decentralized setting in Uganda.

1.7 Conceptual Framework



Conceptual Framework showing the factors affecting the effective management of wetland resources in a decentralized system of governance in Uganda: Adapted and Modified from Andeweg, 2006**.**

The conceptual framework above as adapted from Andeweg, 2006 but modified to suit the researcher's interest of study suggests that effective management of wetland resources under the decentralized system of governance is influenced by a number of factors namely institutional factors such as the human resource capacity and the level of funding; and the existing legal framework (both national and local government bye-laws). It's been noted that the existing laws are virtually inadequate, inconsistent, outdated and unenforceable and therefore cannot offer much in the management of wetland resources in a decentralized system of governance.

What needs to be noted is that in a decentralized system of governance, what is expected in terms of effective wetland management are participatory planning and budgeting, equity, sustainability as well as the enforcement of accountability. As Lane and McDonald (2005:710) put it, many environmentalists consider the local community to be the most appropriate custodian of environmental management since they

> *"are better able to understand and intervene in environmental problems because they are 'closer' to both the problem and the solution".*

1.8 Significance of the Study

The study is expected to expose the weaknesses in the existing legal framework governing wetland management in a decentralized system of governance in Uganda. This should be an eye opener to the government and especially the law enforcers that something is wrong with the existing laws and therefore should come up with some mechanisms to harmonize and enforce the existing laws.

Further, the challenges or opportunities of human resource capacity in the wetland sub sector at the district level will be exposed. This should too help the government to realize the challenges or opportunities available so that they can either exploit the existing opportunities or endeavor to iron out the challenges existing.

Further, the study will expose the necessity for extra funding in the wetland sub sector as wetlands are valuable for the economic and ecological development of the country. As such government should be in position to effect the recommendations that will be made, by for example looking for other alternative sources of funding to the wetland sub sector.

It is envisaged that the study shall contribute to the academic knowledge base not only to the researcher in attaining his MMS, but also to other researchers interested in decentralized natural resource

management with specific interest to wetland management, this being a new science in Uganda (just 24years of recognized management interventions).

It is hoped that the study shall scrutinize the existing current situation in management aspects related to wetland resources, identify the gaps and come up with the workable solutions that will go a long way in improving performance and hence effective management of wetland resources in the country.

It is also hoped that the findings of this study shall influence decision making levels both at the Local and central government levels as far as devolved wetland management in terms of planning, participation and accountability of wetland management services is concerned hence effective and efficient service delivery.

1.9 Justification of the Study

This study was premised on the prevailing status quo in as far as effective management of wetland resources in a decentralized system of governance in Uganda is concerned. Owing to the fact that the current state of affairs in wetland sector is not desirable, efforts should be made to reverse the situation based on concrete evidence envisaged in this study. For example, local observations cited in Uganda's recent State of the Environment report indicate a reduction in wetland coverage, mostly due to conversion to cropland (for example, in Iganga District and southwestern Uganda) and the spread of urban settlements, as in Kampala (NEMA, 2007). The existing legal and institutional framework in place seems to be weak and does not provide protection to the wetlands in Uganda, more so in a decentralized democracy. Even the level of funding from the government to the natural resources sector both at the center and districts is optimally very low. In addition, the limited local revenue base especially with the suspension of graduated tax in 2005 leaves a lot to be desired. This therefore called for a study of this nature so that solutions could be sought.

1.10. Scope of the Study

Geographically, the study was carried out in Mbarara district and focused on six (6) randomly selected sub counties. The study concentrated at the period between 1992 when the decentralization policy was established up to 2010. Under this period, factors affecting the decentralized management of wetland resources were assessed. Conceptually, the study focused on the institutional and legal factors affecting management of wetland resources in decentralized system of governance in Uganda namely institutional funding, human resources and legal frame work.

1.11. Operational Definitions

- **Decentralization-** Devolution of powers from the central government to local governments and communities to participate in decision making processes regarding management of natural resources and particularly wetlands
- **Natural resources**- All God given naturally occurring goods in, under and above the ground such as wetlands, forest, minerals, waters and wildlife.
- **Effective wetland management** – measures put in place to regulate the use of wetland resources in a manner that benefits the present generation without compromising their ability to meet the needs of the future generations.
- **Institutional -** derived from the word 'Institution' here referred to as public organizations, agencies or departments entrusted with the management of public resources
- **Funding** - Means the levels of Central or Local Government's budget allocations and expenditures on the protection, management and conservation of natural resources particularly wetlands for sustainable development.
- **Human resource -** Means the levels of staffing, motivation and skills possessed by the district personnel in service delivery related to wetlands management.

- **Legal framework -** The existing policies, laws and regulations on natural resources and their clarity on the roles, responsibilities, power and authority of various government Ministries, Agencies, and Departments in the execution of their mandates.
- **Planning-** means the participation of all stakeholders(community, district and central government) in deciding the goals and objectives to pursue in line with effective and sustainable management of wetland resources

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviewed the literature related to the topic under study. The literature was reviewed in line with the set objectives in chapter one viz; the impact of institutional funding on the management of wetlands in a decentralized system of governance, the human resource related factors affecting the management of wetlands in a decentralized system of governance and the legal framework affecting the management of wetlands in a decentralized setting. To understand the theoretical concepts surrounding the study however, the theoretical review preceded the actual review.

2.1 Theoretical review

Amin (2005) states that theoretical background seeks to clearly state the basic theoretical orientation/assumptions about variables being studied. This study used the liberal theory and systems theory to explain the concept of variables under investigation.

The Liberal Theory of decentralization: This has origins in the modernization discourse, which was advanced by American thinkers, mainly W.W. Rostow, Talcott Parsons and David Easton. The theory recommends the existence of elected bodies as the means of realizing democratic decentralization. The neo-liberal prerogative of the World Bank supports this view together with the International Monetary Fund. Scholars like Fukasaku and de Mello (1999), Manor (1999), World Bank (1999), Shah (1998), Crook and Manor (1998) agree that the fatigue for centralized governance calls for decentralization of governmental powers, functions and processes to local units as a source of broader participation in democratic governance (Oluwu, 2000; Smoke, 1994; Wunsch and Oluwu, 1990). It's therefore in the same vein that the government of Uganda had to decentralize the management of wetland resources in the 1990s so that communities could fully participate in their management.

The argument here is that democratic decentralization offers the opportunity for greater personal participation, breeds a healthy political understanding, effective debating and future planning. Local leadership training being a value of national democracy local bodies acts as breeding grounds for political leadership at national level. Indeed in wetland management, local communities have been given chance to manage the environmental resources. Entrusting local institutions with environmental decision making, rule making and adjudication contributes directly to the building of democracy. Without powers local governments cannot gain the legitimacy they need to effectively represent local populations.

The theory argues that people acquire experiences needed in conflict resolution, decision-making, mobilization and allocation of resources as well as self-rule. This breeds better societies through community spirit. Hence decentralization allows greater political, religious, ethnic, tribal representation in development decision-making, and creates alternative means of decision-making which offsets the influence over development activities by entrenched local elites who are less sympathetic to national development policies (Rondinelli and Cheema, 1983).

At the local level, individual participation in development decision-making promotes liberty, equality, welfare and ensures accountability of local leaders to the community that they serve. Liberal theorists believe that local democracy is responsive to the needs of the locals, which are identified by knowledgeable decision-makers. Their knowledge of the locality makes them acquainted with the conditions of the place or area.

Liberal theory, thus argues, that interest groups should be recognized to realize meaningful decentralization. Local Governments should appreciate the differences in the needs of different localities and accommodate them with flexibility and willingness to change according to the peculiar

needs of the people. Thus Margaret Thatcher and John Major realized they could not do much without empowering the poor, through decentralization.

Mali and Uganda provide Francophone and Anglophone cases of progressive decentralizations, in which democratically elected local governments have been established as the recipients of decentralized powers. In Mali, however, the environmental service (*Direction National de la Conservation de la Nature*) is still reluctant to transfer significant powers to elected local government although it is possible in the new forestry laws (Yaya, 2000). Similarly, in Uganda, Namara et al, (2001) observes that powers transferred to local institutions are limited by required restrictive management plans. Uganda's Forestry policy of 2001 for example does not specify guidelines for which powers-if any-will be transferred and to which levels of local government, making it difficult to foresee the kind of decentralization that the new reforms will result in (Jesse, 2001) In both cases the laws give local authorities the right to manage natural resources, but under management requirements and plans imposed by the central environmental agencies.

The other relevant theory for this research is the **systems theory:** Systems theory is the trans-disciplinary study of systems in general, with the goal of elucidating principles that can be applied to all types of systems in all fields of research. The systems theory helps to explain the functioning of organizations in an attempt to deliver services or products. A system by definition is a collection of part unified to accomplish an overall goal. A system can be looked at as having inputs, processes, outputs and outcomes as well as sharing feedback among the four named aspects. In a decentralization perspective therefore such as Mbarara district being studied, inputs would include financial, human resource skills and laws where as outputs would include effective wetland management. In this respect, with the possibility of misinterpretations, von Bertalanffy (1950) believed a general theory of systems

should be an important regulative device in science to guard against superficial analogies that are useless in science and harmful in their practical consequences.

2.2 Review of Related Literature

2.2.0 The institutional framework

Many countries have established institutions (ministries, agencies) to enforce environmental protection laws. In Uganda, there are ministries of Water and Environment, Fisheries, Tourism, and agencies like National Environment Management Authority (NEMA), Uganda Wildlife Authority (UWA) as well as National Forestry Authority (NFA) with legal mandates to manage the environment. These work in close collaboration with a number of Non-governmental organizations, scientific and technical institutions. However, there is no effective coordination amongst the various ministries and institutions regarding the integration of environmental concerns at the planning stages. The policies seem to be fragmented across the board with each government body having different mandate (NEMA, 2008).

2.2.1 Funding and effective wetland management in a decentralized setting

For wetlands resources to be effectively managed and conserved, there is need for sufficient funding to the sub-sector. Many national governments especially in third world countries have continued to allocate a small share of their budgets to the ministries and departments of wetland resources and this has directly impacted on their management.

In Uganda, the Water & Environment Sector continues to be allocated a declining proportion of the overall Government of Uganda's annual budget. While the sector was allocated 7.4% of the national budget in 2003/4, this had dropped to 3% in 2008/9. In monetary terms, allocations have dropped from UGX 248 billion in 2003/4 to UGX 184 billion 2008/9 (in nominal terms without factoring in inflation).

In FY 2008/9 the Environment and Natural Resources (ENR) sub-sector was allocated UGX 34 billion. The Water and Sanitation (WSS) sub sector was allocated UGX 150 billion. Overall actual expenditure for the sector was 95.7%. The District Water and Sanitation Development Conditional Grant (DWSDCG) accounted for a significant proportion of the unspent funds, (i.e.UGX 3.3 billion not spent within the financial year), while Water Resources Management under-spent by UGX 1.7 billion (MWE, 2009).

Local governments are supposed to use their own resources to put in place environmental institutions, such as district environment committees and sub-county environmental committees, as stipulated in the law, and to develop environmental plans. However, according to Nyangabyaki, (2003) it is interesting to note that some districts such as Mbale and Masindi have succeeded in doing so, but others like Mukono have not. In Mukono, what is usually dubbed as an environment committee is actually a production and extension committee, one of the standing committees of Mukono District Council, which converts itself into an environment committee when there is need to deal with environmental issues (Nyangabyaki, 2003).

Importantly also, environmental issues are not a priority area for any of these local governments; they are merely forced onto the districts. Masindi and Mbale have made these advances because of donor funding (Nyangabyaki, 2003). Mbale District has received World Bank project funds. These funds, which were channeled through NEMA, were used to purchase furniture, computers and a vehicle, and to pay the salary of the District Environment Officer. They were also used to fund the preparation of an environmental action plan, which is a participatory, "bottom up" process that requires a lot of money, and the implementation of micro-projects (in areas such as forestation and agro-forestry) identified through the planning process (Mbale District 1993; MDPEPC 1999). In Masindi District

funds were provided through the USAID-funded Environmental Protection and Economic Development Project (EPEDP) (MDLG/EPEDP 2002).

Without EPED, Masindi would have been like Mukono, which does not have a *bona fide* district environment committee (Nyangabyaki, 2003).

Therefore, where there has been no external financial support, districts have not established the institutions stipulated in the law. Some districts have employed environmental/Wetland officers but do not have the budget to pay their salaries and even facilitate them to carry out their work. In all these districts, the environment office is seldom more than a one or two-person department. Environmental activities are carried out using funds from donors or from two government programs, namely the Plan for Modernizing Agriculture and the Poverty Action Fund. This puts into question the long-term sustainability of the environment or wetland based enterprises initiated through such short term programs or donor funding.

World Bank (2010) stresses that in Uganda, there is need for Treasury and Development Partners to dedicate more resources and consideration to the environment; currently, sector funding remains extremely low – ENR funding was only 1% of the total national budget in 2009/2010. While it appears to have increased in comparison to the previous year, in reality the increase is mainly due to inclusion on-the-budget of funds previously channelled off-budget and increase in donor funding. Taking into account immense importance of natural resources for livelihoods of the Uganda's population– the environment and natural resources support the livelihoods of 91% of Ugandans; over 90% of Ugandans depend on biomass for their need to be increased now; ENR funding for the districts remains dismally low–only 0.9% of the total funding is sent to the districts. Average annual ENR funding in 2010/2011 is only about 4.5 million shillings per district.

According to the 2009/10FY, the overall financial resources for the water and environment sector were UGX 318.1 billion comprising UGX 238.4 billion (75%) under the government budget and UGX 79.7 billion (25%) off-budget support. The Government (on-budget) allocation for Water and Environment was approximately 3.4% of the total national budget of UGX 7.04 trillion. Government funding to the sector declined over the 2004/05 – 2007/08FY, but has since then been increasing in nominal terms (MWE, 2010).

According to the Uganda National Budget for Financial year 2007/08, the draft estimates provided an allocation of Ush 155.45bn for the Ministry of Water and Environment, representing 3.6% of the National Budgetary Resources. With these funds the Ministry has identified 10 Key Policy Objectives in line with the roadmap of the President's Manifesto.

Table 2.1: Summary of budget allocations for the MWE in comparison with WMD (including district disbursements under PAF which constitute 50-60% of WMD budget)

Years	**MWE**	**WMD**
	Amount (Billion Shs)	***Amount (Billion Shs)***
2004/2005	236	-
2005/2006	212	1.055
2006/2007	210	0.886
2007/2008	173	0.918
2008/2009	184	1.336
2009/2010	238.4	1.586
2010/2011	224	1.461

Source: Ministry of Water and Environment, 2010

Between 1995 and 2005, the Wetlands Inspection Division spent about $US 2 million from donor agencies to carry out wetland inventories for 30 Districts and build the National Wetlands Information System (WID and IUCN, 2005). The system tracks 13 main uses of wetlands: beekeeping, cultivation of food and fiber, fishing, harvesting of natural herbaceous vegetation, human settlement, hunting, livestock grazing, mineral excavation, natural tree harvesting, tree plantations, tourism, wastewater treatment, and water collection. It also classifies each wetland use according to its level of impact on

the individual grassland, swamp forest, or other wetland system. This information can then be converted into an index that classifies each wetland according to the combined impacts of all uses, thus helping to manage wetland resources more optimally.

According to UN-Water, around the year 2000 donor financing accounted for up to 75% of the total sector funding. The sector benefited significantly from the Poverty Action Fund (PAF) under the framework of the PEAP (UN-Water; World Water Assessment Programme, 2006). Uganda became the first country that qualified for debt relief under the Heavily Indebted Poor Countries initiative. Debt relief contributes about US$80 million per year to the PAF (Water Aid, 2005).

Another challenge facing the wetlands sub sector in Africa is that most of the projects are donor funded and this affects sustainability. According to Soderstrom, 2003, for example, Global Environment Facility (GEF) is funding the Lake Malawi/Nyasa Biodiversity Conservation Project, the goals of which are to strengthen the existing water quality monitoring efforts, survey the species of fish, and prepare a biodiversity map of the lake. GEF is also funding work on Lake Victoria (Tanzania and two non-SADC countries) and is providing a Block grant for $350,000 to OKACOM to develop a strategic action plan for the Okavango Basin.

Global Water Partnership (GWP) seeks to translate an emerging global consensus on water resources management into responsive action on the ground. The GWP has identified Southern Africa as the region with the highest priority for initial GWP action. A regional meeting took place in Namibia in November 1996 and a follow-up meeting was held in Lesotho in January 1997, co-chaired by SADC Water Sector Unit and GWP (Soderstrom, 2003).

The above funding challenges coupled with lack of transparency and accountability in ENR sector present an awkward situation for the proper management of wetland resources in the country and hence

compromise the provision of wetland values and benefits expected from sustainably managed wetland resources.

It is important to note that many governments rarely address environmental budgetary strategies and instead focus on sector based technical issues such as health and education. In spite of the current requirements to mainstream environmental concerns in their development plans and budgets, most treasuries and planning authorities in the third world rarely allocate adequate finance for environmental investment. This has in turn led to negligence on measures to protect the environment leading to environmental degradation.

Decentralization in Africa has often failed, despite promising discourses, because of the over centralization of resources, limited transfers to sub national governments, a weak local revenue base, lack of local planning capacity, limited changes in legislation and regulations, and the absence of meaningful local political process (Robinson 2007). Uganda is confronted with similar problems. In the case of wetland management, Andeweg (2006) found that local governments are responsible for planning and budgeting for wetland management activities, but the funding for these activities is allocated by the central government. In the case of environmental health; a typical local-level service provision, funding must be secured from the central government (Mubeezi 2007). The lack of fiscal decentralization is therefore felt to constrain adequate environmental and natural resource management at the local level.

Over time, several changes have been made to the ways in which local authorities access the financial resources they require for the implementation of their policies. On average, nearly 90% of the total expenditures of local authorities in Uganda are funded by the central government, although the extent of this reliance varies among different districts. In his budget speech for fiscal year 2008/09, the

Minister of Finance, Planning and Economic Development announced a total allocation of 1.23 trillion Ugandan shillings (or 34% of the national budget, excluding donor projects) as conditional, unconditional, or equalization grants to the local governments. In the same speech, the Minister also announced new allocation formula for the distribution of these resources since the *"lack of a clear criterion…has been noted by Parliament and other stakeholders as an area of concern"* (Daily Monitor, June 13, 2008). Through the abolishment of the locally collected graduated tax in 2005 and increased use of conditional grants, the central government tries to influence and restrict "choice" and political space for local authorities by attaching strong conditions and supervision procedures to the use of grants.

A related, permanent tension is the lack of a mechanism in Uganda to reconcile local authority (horizontal) and sectoral agency (vertical) responsibilities and activities; this lack undermines the coordination of resources that should lead to better environmental management. In practice, sectoral programs are financed and monitored by central ministry agencies and implemented independently from local authorities; genuine central-local partnerships that make use of the comparative advantages of local governments could enhance the planning and implementation of these programs (Romeo, 2003). Specialized agencies such as the UWA and NFA constitute dedicated and centralized structures and have local staff who must work with the DEO and other local environmental institutions. However, they are national governmental staff and their loyalty remains with the central government.

2.2.2 Human resource and effective management of wetlands in decentralized system of governance

It is significant to note that NEMA has been carrying out environmental sensitization programs for all local government technical staff and councilors. However, many councilors find it difficult to support environmental issues (Nyangabyaki, 2003). A study conducted in Mukono noted that in the overall management of the Council affairs, environment issues do not attract high priority because people's awareness including the councilors is not very high. There is an executive committee within the LC in

charge of production, marketing and environment. But it appears that the committee is generally more interested in development than environment. Consequently, any environmental activity, which needs financial support, cannot easily be carried out. Within the administration, the positions of district environmental/wetland officer are newly created. They normally do not have means of transport to inspect wetland issues locally. At the service delivery level of LC3 administration unit, there is no specifically designated environmental/wetland officer. Thus, they often have to depend on other extension staff (for instance, veterinary doctor and agricultural extension officer) at LC3 who already face transport constraints (Saito, 2002).

The public sector in Uganda is characterized by weak performance and accountability and often remains inefficient and overextended. There is a duplication of functions and procedures and organizational compartmentalization. On the human resource side the public service is recognized to suffer from skills gap, weak management and a shortage of high-level managers and skilled professionals (http://www.opm.go.ug/departments.php).

However, several reviews at sectoral level as well as the annual decentralization reviews and the Public Service Reform Programme have identified challenges and weaknesses in the coordination of the various reforms. Government therefore responded to this challenge by creating a Public Sector Management Working Group (PSM-WG, to facilitate better coordination of the machinery of Government to effectively achieve the development outcomes defined in the PEAP and other National Development Strategies to follow (NDP). The PSM-WG works to strengthen linkages and synergies between key institutions, reduce overlaps and duplication, enhance the consistency and focus on the various reform efforts, create a basis for sustained political support for reform, and ensure policy dialogue and coordination within PSM areas and with related reform areas. The outcome of such coordination should be seen as a "positive sum-game" whereby all stakeholders benefit (http://www.opm.go.ug).

The main programmes and cross-programmatic initiatives to promote public sector management are presented in the following; t*he Public Service Reform Programme (PSRP)* is being spearheaded by the Ministry of Public Service (MOPS). The PSRP focuses on six core challenges to public service and public sector performance namely: i) skills gap and weak management ii) weak performance and accountability iii) inefficient and over extended organization iv) a disenabling work environment v) poor pay vi) sustained support for reform among political and technocratic leadership; Government's *Financial Management and Accountability Programme* (FINMAP) aims to improve the efficiency and effectiveness of central and local government public financial management and accountability processes. It also seeks to increase transparency in the use of public funds and reduce opportunities for corruption.

Understaffing puts tremendous pressure on the limited number of staff both at national and local government levels. The Wetland Management Department which is the umbrella institution for wetland management in the country, for instance has only 16 established public service personnel (WMD, 2010). This is exacerbated by low levels of motivation as observed in the limited facilitation and training opportunities that would enhance staff performance (WMD annual report, 2009/10). Some scholars have also explored into motivation as a factor influencing wetland management. According to Viteles, (1953)

> *"Motivation represents an unsatisfied need which creates a state of tension or disequilibria, causing the individual to move in a goal directed pattern towards restoring a state of equilibrium by satisfying the need"* (Viteles cited by Chandan, 1997: 325).

According to Chandan, (1997:325) *"Performance = Ability x Motivation*". This means that if either ability or motivation is zero, then the resulting performance is zero. However, people with high motivation learn to become capable while superior ability may not induce any motivation.

Koontz and Weihrich (2005) argue that performance means productivity which is defined as output-input ration within a time period, with due consideration for quality. It basically refers to efficiency and effectiveness of an individual in an organizational operation.

Nickols, (2003) says there are many factors affecting employee performance namely; Goal clarity, repertoire, and knowledge of structures for example which actions lead to which result to feedback, mental models (internally held -views) and motivation environment. However this study will be on motivational factors, which are reward management systems, working environment, training and development in relation to employee performance.

Inadequate staffing in most districts across the country is affecting the implementation of key government programmes, including the Millennium Development Goals (MDGs). According to the Acting Secretary General of the Uganda Local Governments Association, a survey carried out by the Uganda Local Government Association (ULGA), established that the average staffing at the moment is around 64%, which affects service delivery across the country (The New vision, Sunday, 26th September, 2010).

Moreover, most of the district staffs are required to be degree holders in addition to other professional qualifications. "Under the current law, most posts previously held by diploma holders require people with higher qualifications, at degree level at the lowest," However, according to the Uganda Local Government Association (ULGA), even getting diploma holders to work at the sub-county level is proving to be very difficult at the moment.

Local governments are facing a serious challenge of retaining professional staff like health workers, natural resource scientists, engineers and teachers because of poor pay and poor working conditions. Kabarole district for instance had operated for three years without attracting any medical officers until 2009 when two medical officers were recruited," The district also has only 58% of the required civil

servants, making a deficit of 42%. In Gulu only 60% are operational, 56% in Pallisa and 63% in Mayuge (The New vision, Sunday, 26th September, 2010). Most districts in Uganda lack substantive Natural Resource Officers. According to the New Vision, Monday, April 20, 2009, Kiruhura district local government for example advertised for the position of Natural Resources Officer but to date no single candidate has been recruited.

2.2.3 Legal framework and effective management of wetlands in decentralized system of governance

2.2.3.1 International and National legal frameworks

Globally, Natural Resource Management is guided by international conventions, treaties and protocols that States or Nations subscribe to and domesticate in their legal systems as generally acceptable universal standards for enhanced sustainable development (Kameri-Mbote 2002). Uganda is a signatory to several international conventions and agreements relevant to wetlands conservation. These include among others: the Ramsar Convention on Wetlands, 1971, Convention on Biodiversity Conservation1992, World Heritage Convention 1972, Convention on International Trade in Endangered Species (CITES) 1979, Agreement on the Conservation of African-Eurasian Migratory Water Birds, Convention to Combat Desertification, 1994 and Agenda 21, 1992 (R.O.U, 2003).

In 1972, the first ever United Nations international conference on the Human Environment was convened in Stockholm (Sweden) and brought together 113 countries including Uganda to discuss issues of common concern(UNEP, 2002). Decisions made since Stockholm 1972 now influence natural resource management activities at different levels. In 1988, the Government of Uganda ratified the Ramsar Convention on wetlands in its commitment to promote the sustainable management of wetlands, building on its commitment to the outcomes of the Stockholm conference in 1972. Ramsar convention is an intergovernmental treaty which offers a framework to promote local, national, regional and international action and cooperation for wetland conservation. Currently, the Convention has 158 contracting parties (www.ramsar.org).

In spite of these efforts by the Uganda Government to commit to international engagements for the management of natural resources and specifically wetlands, little has been done to domesticate these treaties and protocols in national laws and as such implementation remains a biggest challenge.

There are several relevant policies and laws that provide for the management and conservation of wetlands in Uganda. These include: the Constitution (1995), National Environment Statute (1995), Wetlands Policy (1994), Water Statute (1995), the Land Act (1998), Local Government Act (1997), the National Environment (wetlands, river banks and lakeshores) Regulations (2000) among others.

The National Wetlands Policy 1994 is based on three principles: First, wetland resources form an integral part of the environment and their management should be integrated in the overall development strategies and activities; second, conservation of wetlands can only be achieved through a cooperative approach that involves all concerned people and organizations in the country, including local communities; and third, present attitudes and perceptions of Ugandans regarding wetlands must change in order to successfully conserve and manage wetlands (MNR, 1995).

The National Wetland Programme that started in 1989 was instrumental in getting wetland clauses incorporated in several national policies and laws concerning the management of wetlands. Wetlands are now included in the Constitution 1995, the National Environmental Act, 1995 Cap 153, the Water Statute 1995, the Local Government Act 1997 and the Land Act 1998. A number of statutory regulations have also been put in place to operationalize these laws and policies. The National Environment (Wetlands, River Banks and Lake Shores) Management Regulations 2000, The Environmental (Impact Assessment and audit) Regulations, 2003, Water Quality Regulations, 2006, Waste Management Regulations, 2006 that were published in pursuance of the National Environmental

Statute 1995. These policies, laws and regulations have further provisions on the decentralization and management of wetlands.

The constitution of the Republic of Uganda 1995 has provisions for enhancing conservation and management of the environment and natural resources. Objective XIII of the National Objectives and Directive Principles of State Policy and article 237(2) (b) of the constitution pronounce the public trust doctrine. The constitution also enshrines a constitutional right to a clean and healthy environment in its article 39. Civil society has used article 50 of the constitution to enforce this right using public interest litigation.

These laws, policies and regulations spell out prohibited activities in wetlands that must be regulated. It contains activities that may damage the sustainability of the wetland if the activity is uncontrolled. Among the regulated activities in a wetland include:- brick-making; recreational activities such as sport fishing; cultivation; drainage; commercial exploitation of wetland resources; sewage filtration; fishing using fish gear and weirs; construction of transport and communication facilities such as roads; burning; and commercial harvesting of wetland products (NEA,1995: second schedule). All plans and projects that may have an impact on the environment and on wetlands require an environmental impact assessment (EIA) before they can take place (NEA, 1995)

Apunyo (2006) stresses that Uganda's process in the enactment of environmental related laws has a strong foundation guaranteed in the Constitution 1995. This has enabled enactment of subsequent specific wetlands related laws to address wetland degradation reaching alarming level of 20% in Eastern Uganda. Implementation of some of these laws has made landmarks in the management of wetlands. For instance the legal requirement for environmental impact assessment and the issue of environmental restoration orders to wetland encroachers in 2004 guided development projects

activities in the wetlands. However, effective implementation of these laws is faced with a number of limitations and challenges; the major limitation being political interference which undermines enforcement of laws. While the major challenges are a result of various laws scattered in the various national laws and general lack of awareness by the general population of these laws, this accounts for continued assumed individual ownership of wetlands which contravenes the Constitutional requirement for the state to own and manage wetlands for good of all its citizens.

In many developing countries, environmental laws are only hortatory words unless they are implemented effectively; yet, non-implementation, non-enforcement, and non-compliance are so common that they must be viewed as the norm rather than exception in the great majority of nations. The illusion of international and national environmental law in poor nations is reinforced by a peculiar mixture of idealism, myopia, and cynicism that induces states to ratify treaties and enact domestic laws without any expectation of implementation or compliance (http://www.ecovitality.org/badlaw.htm).

Many national laws are similarly ill-conceived because they are uncritically copied from environmental statutes of developed nations or from general framework laws distributed by UN agencies and other multilateral institutions. UNEP, for example, in its ELI/PAC program sends out teams of legal technicians to help developing states adopt a wide range of standardized environmental laws. These teams spend two weeks in Burundi, two weeks in the Maldives, two weeks in Mongolia, and then they count their success by the number of new statutes formally enacted by states that now have more environmental laws than lawyers or natural resources managers. It should be evident that conservation laws which are not carefully adapted to the distinctive political, social, economic, cultural and ecological conditions in each developing nation are likely to prove useless or worse (http://www.ecovitality.org/badlaw.htm).

Apunyo (2006) further argues that the existing legislation is fragmented in the different laws. Access to these pieces to the general public is therefore constrained. The problem is further amplified by the high illiteracy rate estimated at 38% of the population aged 10 years and above.

2.2.3.2 The local government level legal framework

Before 1986, Uganda was a highly centralized state with all functions vested in the central government. There, however, existed administrative units for administrative convenience. When the NRM took over power it brought with it its previous administrative structure as a guerrilla force. This structure of the organisation was a pyramidal one composed of resistance committees organized from the villages through parishes, sub-counties, counties and districts culminating into a National Resistance Council. From 1986 to 1996 the latter served as the national parliament.

The question of how to empower the lower committees in day to day government work was an issue which exercised the mind of the government of the day. In 1987, a law was passed giving these committees legal existence (The Resistance Councils and Committees Statute No. of 1987). This statute was amended variously until 1993 when it was replaced by the Local Governments (Resistance Councils) Statute 1993 which decentralized many functions from the Central Government to the Districts. This statute was short-lived because the constitution 1995 necessitates changes in the law.

The Constitution 1995 provides for the establishment of a local government system based on the District as the Unit following the principles of:

(a) Devolution and transfer of functions from the central to the local governments;

(b) Decentralization ensuring the democratic participation of the people; and

(c) Autonomy for local governments in the matters of finance, personnel and planning and execution of projects (Article 145).

In its Sixth Schedule, the Constitution provides for the areas for which the central government remains responsible. The areas not provided for in the Sixth Schedule are the responsibility of the Local Governments. In addition Government may delegate other areas to local governments by law (Article 189). What is important to note is that the Sixth Schedule does not include wetlands although it mentions land, mines, mineral and water resources and the environment as responsibilities of the Central Governments.

The situation was clarified by the passing of the Local Governments Act, 1997. Under this Act, the responsibility for the management of wetlands is put in the hands of the Districts (See Second Schedule Part 2).

Under the Local Government Act of 1997, district councils (DCs) and city councils are empowered to make ordinances and bye-laws without reference to, or seeking permission from, the center, provided those bye-laws do not conflict with the national constitution or other laws. The lower units of local government (sub-county councils, town councils, city council division and municipal division councils) can similarly pass bye-laws provided they are not inconsistent with any other laws (Bazaara, 2003).

Although since 1986 the government has tried to put a number of environmental laws and policies in place, most of these policies and laws have made protection of the environment difficult because of their conflicting nature. Lack of government consultation from various stakeholders in formation of laws and policies have caused conflicting situations and interests by various groups resulting in sacrificing the environment. For example, the city and country plan was adopted in 1994 before the

environment statute which came into force in 1995. The two have contradictions which are not yet harmonized (The New Vision, Tuesday May 16th 2000 pg 7).

Many of the already established environmental institutions lack power to punish or take action on environmental offenders. For example, according to a report, managing the interface between urban and district councils in Uganda by professor Muhumuza of Makerere University Department of Political Science on the controversial Kampala city council solid waste disposal site in Lusanja Kiteezi, Wakiso district indicates that the existing national environmental management laws are incompetent and vague on providing and taking action on environmental degraders. Where the law is contravened like in the case of Kiteezi Lusanja, it can only carry out an impact assessment or audit and make recommendations but there exists no provision within the law empowering it to whip in case of non-compliance (Muhumuza, 2000)

Matovu (2006) says there is the problem arising from failures at different institutional linkages for environmental management. Whereas for example wetlands are held in trust by Central Government or local Government for the common good of the people of Uganda, recent examples of wetland abuse have included cases where Local Authorities have been the very violators of these constitutional and legal provisions. Where this has happened, local authorities have indicated that they converted wetlands for the sake of providing their communities with economic growth opportunities and for fighting poverty. It is therefore a dilemma that the very institutions entrusted with the protection of wetlands have in some cases not assisted the crusade for their conservation.

There is the problem of enforcement of the legal requirements for protection of the environment and public health. Whereas it is now largely accepted that environment is important worth protecting, and whereas enforcement of environment regulations, is expected to be done through a hierarchy of

enforcement levels from national (WMD, NEMA), districts down to community levels, the enforcement capacity available at all these levels appears not to be able to match the widespread nature of the problem of environment degradation.

In Uganda, until now, NEMA continues to receive development proposal on wetland areas that have been demarcated as plots by planning authorities. This apparently continues to send wrong signals to other wetland users who seem to perceive a sense of no action being taken in especially urban areas where wetland encroachment continues. In Kampala District, most of the wetlands which served as flood relief areas were allocated for industrial and residential developments and this trend has not been halted completely yet. Worth mentioning is the difficulty of enforcing planning requirements in peri-urban flood prone areas where the urban poor communities have massively and indiscriminately encroached into the wetlands, such as is the case in Bwaise and Bukoto areas (Matovu, 2006).

Important to note is conflicting nature of law enforcement by different government agencies responsible for managing different segments of environment. NEMA's involvement in enforcement of the wetland laws at the expense of the implementing agencies like Local Governments or WMD signifies lack of human and financial capacity for the later or misinterpretation of the laws; yet according to the NEA, 1995, the role of NEMA is limited to coordination, supervision and monitoring. Many Environmental Impact Assessment reports for various projects in wetlands have been approved by NEMA against the advice of Local Governments or WMD causing frictions between the very government institutions responsible for the sustainable management of wetlands in the country.

2.3 Summary and Conclusion

From the literature reviewed, it can be concluded that inadequate implementation of international environmental treaties, national conservation laws and local government laws is pervasive, more the norm than the exception. Wetland conservation and protection inherently is a difficult, expensive

undertaking, and virtually all developing states lack scientific knowledge, managerial expertise, financial support, administrative frameworks, and political commitments needed for implementation of effective conservation measures.

Although countries such as Uganda have a number of institutions and legal framework in place to manage the wetlands resources, the literature has indicated that these institutions are weak and the laws in place have their own down turns. For example the literature has indicated that Local Authorities have been the very violators of the constitutional and legal provisions governing the environment. The February, 2005 presidential decree stopping the government agencies from evicting encroachers from forests and wetlands is a case in point. The directive cites lack of consultations with the very violators of the state laws. Until this ban is lifted, the hands of wetland and forest law enforcement officers remain tied putting the integrity of these natural resources at stake. It is therefore a dilemma that the very institutions entrusted with the protection of wetlands have in some cases not assisted the crusade for their conservation.

Further, some of the laws in place to protect the environment and particularly wetlands are outdated, others are not complied to and enforceability mechanisms are weak. Therefore, this study will go a long way to identify all the weaknesses within the existing institutions and laws in place for the management of the wetland resources services in decentralized setting and will make recommendations that once effected will see these institutions and laws strengthened for the proper management of wetland resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter elaborates the methods of data collection and analysis used during the study. It shows how data was collected, the population studied, sample selection, data collection methods, pre-testing, procedure of data collection, and data analysis.

3.1 Research Design

A case study design was used during the study. Fisher (2007:59) stresses that case studies enable the researcher to give a holistic account of the subject of your research. In particular, they help the researcher to focus on the interrelationships between all the factors such as people, groups, policies and technology that make up the case studies. As a result, the study was conducted in Mbarara district to study the effect of institutional and legal factors affecting the management of wetlands in a decentralized system of governance.

The study employed both qualitative and quantitative techniques in sampling, data collection and data analysis. The study was however largely quantitative although some qualitative methodologies such as interviewing and FGD were used for triangulation purposes.

3.2 Study Population

According to UBOS (2008), the population of Mbarara district stood at 418,200 in 2009. Male population is 204,300 while the female population is 213,900. The population density is 112, with a growth rate of 2.8 percent per annum. Household size is 4.8 for rural and 8.0 urban. The study basically focused on the established structures within the district like the local council committees, technical planning committees and the district and local environmental committees established by law.

3.2.1 Sample Size and Selection

A sample is a smaller group obtained from the accessible population, each member in the sample is referred to as a subject (Mugenda and Mugenda, 1999). Collecting data from the entire population is not possible because of the cost and time involved in collecting and analysing it. For this study therefore, six (6) sub counties/divisions were randomly selected from 16 sub counties/divisions that make up Mbarara district. From the six sub counties/divisions, 2 parishes were selected from each sub county/division. Two villages were then selected from each parish. The final samples for the study were then selected from the village councils.

In all, 24 village councils represented the district. Each village/LC1 council consists of 9 committee members which made up a total of **216** respondents at that level. i.e. 24x9=216 respondents.

Other respondents were purposively selected as shown on the table below.

Table: 3.1 **Summary of the sample size and selection**

Category	**Population**	**Sample size**	**Sampling technique**
Local/Village councils	742villages(6,678committee members)	216	Simple random
Sub County/Division LEC	102committee members	36	Simple random
Sub county technical staff	102 extension staff	36	Simple random
Natural Resource dept	10	6	Simple random
DEC	07	07	purposive
DTPC	10	10	purposive
TOTAL	**973**	**311**	

Source: Mbarara District Local Government Planning Unit, 2011.

Roscoe (1975) rule of thumb states that a sample size between 30 and 500 is appropriate for most studies, therefore the sample size used for this study was 311 individuals which the researcher thought it was appropriate.

3.2.2 Sampling techniques and procedure

The researcher employed the cluster (multi-stage) sampling method to select the respondents. Cluster sampling is used when it is not possible to obtain a sampling frame because the population is either large or scattered over a large geographical area (Mugenda and Mugenda, 1999).

Selecting at a random, six sub counties/divisions were selected from Mbarara district, two parishes selected from each of the six sub counties/divisions and then two villages were finally selected from each parish. The table 4.4 below shows the sub counties, parishes and villages that were selected.

Table: 3.2: Sampling procedure

No.	Sub county/division	Parish	Village
1	Bubaare	i. Mugarutsya ii. Rwenshanku	Mugarutsya I, Mugarutsya II Bubaare I,Rwenshanku
2	Nyamitanga	i. Ruti ii. Katete	Nyamitanga, Kirehe Katete central, Rwizi
3	Ndeija	i. Bujaga ii. Ndeija	Buteraniro, Bujaga B Ibaare, Ndeija central
4	Rubindi	i. Nyamuriro ii. Rwamuhigi	Nyamiriro, Bugorora Kigango, Rugarama
5	Nyakayojo	i. Bugashe ii. Nyarubungo	Rutooma, Bugashe Macuro, Rwakwezi
6	Rugando	i. Kitunguru ii. Nyabikungu	Nyaakaguruka, Kyamugashe Rugarama, Butahe

The key informants were however purposively selected from the local council established structures at the sub county/division and district level.

3.3 Data Collection Methods

The study employed both quantitative and qualitative methods of data collection. Quantitative data collection methods included questionnaire while the qualitative methods included interviews, focus group discussions, and documentary review.

Questionnaires: According to Amin (2005), a questionnaire is a self-report instrument used for gathering information about variables of interest in an investigation. The researcher using a questionnaire (close ended) was able to capture the data that he needed. Using a self administered questionnaire, the researcher was able to capture views from Local Environment Committees and technical staff at sub county/division level as well as staff from Natural Resources department at district level. In total **68** respondents out of **78** were reached using this method.

Interviews: An interview is an oral administration of a questionnaire or an interview schedule. Interviews are therefore face to face encounters (Mugenda and Mugenda, 1999). Using an interview guide, the researcher was able to interview Key respondents who were deemed knowledgeable about the topic under investigation. These included respondents from the District Environment Committee/ Committee on Production and Natural Resources and District Heads of Department that constitute District technical planning committee. A total of **13** out of **17** key informants were interviewed. The advantage with this method is that it allowed probing which led to generation of crucial results on the pertinent issues under investigation.

Focus group discussions: A Focus Group Discussion (FGD) is a group discussion of approximately 6-12 persons guided by a facilitator, during which group members talk freely and spontaneously about a certain topic. Its purpose is to obtain in-depth information on concepts, perceptions and ideas of a group. The researcher conducted **19** out **24** focus group discussions planned and each group constituted between **5-11** people at the village/LC1 level involving mainly the LC1 executive committee members and sometimes opinion leaders. This saw a total of **141** out **216** respondents interacted with under this method.

Documentary review: Secondary data collection involved document analysis of journals, print media, text books, and other reports from the districts, sub counties and Water and Environment Ministry. Data from secondary sources supplemented that from primary sources.

3.3.1 Data collection instruments

Three research instruments namely; the questionnaire, interview guide and Focus Group Discussion guide were developed for data collection. Questionnaires are preferred because they give the respondents ample time to think through the questions and give detailed information especially if they are self administered. The interview guide on the other hand has an advantage of capturing in-depth data from the respondents since it involves probing while focus group discussions helped the researcher to generate a lot of information from the knowledgeable informants.

3.3.2 Validity and Reliability

Validity is the accuracy and meaningfulness of inferences which are based on the research results. In other words, validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Mugenda and Mugenda, 1999). Validity was measured using the pre-testing method. The designed data collection instrument was tried out on 8 individuals in similar situations to those of the selected sample under study in a different district. However, the results from the pretest study were not included in the final report. Pre-testing the instruments identified deficiencies in the instruments like unclear directions, asking related questions, pro-longed interviews, cluttered questions and wrong numbering were revealed and corrected. Also my supervisors helped me clean the tools.

Reliability on the other hand is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda, 1999). Reliability was tested using the

internal consistency method. This involved determining the Cronbach's Alpha Test where by the SPSS computed value was 0.72. According to Sekaran (2003), if the Cronbach's Alpha value is equal or above 0.60, then the instruments used are reliable. The reliability analysis for each of the variables in the study was computed with results indicating the following:

0.828 was the reliability for funding

0.626 was the reliability for human resource

0.770 was reliability for legal framework

0.662 was reliability for wetland management

3.4 Procedure of data collection

After the approval of the research proposal by the university supervisor, the researcher obtained a letter of introduction from Higher Degrees Department (HDD). This letter helped to introduce the researcher to the relevant authorities in Mbarara district where the study was to be conducted. This allowed the researcher to move freely and collect the required information from the selected respondents without any suspicion.

3.5 Data Analysis.

Data analysis is the process of bringing order, structure and meaning to the mass of information gathered (Mugenda and Mugenda, 1999). The instruments used to collect information yielded both quantitative and qualitative data and obtained both primary and secondary information.

The Quantitative data generated was sorted, cleaned, condensed and summarized using descriptive figures, tables and measures of central tendency such as the mean and standard deviation from which meaningful interpretations were drawn. Positive and negative responses were compared and expressed as a percentage of the sample population. Using SPSS, a statistical package for analyzing data,

relationships were analyzed through correlation and regression analysis measures of association to get the contribution and effect of the institutional and legal factors of funding, human resource and legal framework to the management of wetland resources in decentralized system of governance. Using the Pearson's coefficient, the researcher was in position to know whether or not there exists a relationship between the institutional factors of funding, human resource and legal framework AND the management of wetland resources in decentralized system of governance.

The coefficient of correlation measures the degree of relationship between independent and dependent variables and also measures the degree of co variation either positively or negatively. Regression analysis was further done on the research variables to determine the variable that is most fitting in affecting the decentralized wetland resources management. In general simple regression estimates a linear equation of the form:

$Y = a+bx$

Where; **a** is constant, **b** is the regression coefficient, **x** is independent variable and **Y** the dependent variable. To interpret the direction/strength of the relationship between variables, one looks at the sign of the regression (b coefficient) and the greater the coefficient, the stronger the relationship between variables.

Qualitatively, data was continually edited and analyzed to capture the expressions of the key informants particularly those captured during FGDs and interviews. This was done by recording the presumed vital information verbatim and this helped the researcher to compare with the responses from the general survey questionnaires to arrive at informed analyses and conclusions about the subject of study. Relevant literature from print media, classical documents and journals was also used to compare, discuss and analyze the findings.

3.6 Measurement of variables

The variables were measured using a likert scale. A likert scale consisting of a number of statements which expressed either favorable or unfavorable attitudes towards the given object was set to which the respondents were asked to respond. Each response was given a numerical score, indicating its favorableness or unfavorableness and the scores were totaled to measure the respondent's attitudes. The scale of 5-1 was used to help the researcher measure the extent to which objectives were achieved and 5 represented strongly agree 4= agree, 3=neutral, 2= disagree and 1 strongly disagree.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

The study aimed to examine the institutional and legal factors affecting the effective management of wetland resources in a decentralized system of governance. The wetland management areas under this study included funding, human resource capacity and legal framework. The study was carried out in Mbarara district and was intended to establish the extent to which decentralization has affected whether positively or negatively the management of wetland resources in the country.

This chapter is therefore divided into two sections:- i.e. presentation of background variables and empirical results.

4.1 Demographic characteristics

This section presents the x-tics of the respondents that participated in the study, their age, gender, level of education and positions of responsibility held at the time of interview. It also gives the category of respondents and portion drawn from each category during the study

Table 4.1: Respondents response rate

Category of respondents	**Expected respondents**	**Actual respondents**	**%ge response**
Sub County/Division Political leaders	36	18	50
Sub County Technical staff	36	41	113
District Natural Resource Dept staff	6	9	150
Total	**78**	**68**	**87%**

Table 4.1 indicates 68 respondents out of expected 78 respondents were reached by the researcher which puts the response rate at 87%. This implies that the study was generally representative as envisaged in the selection of sample size. The information collected using the self administered

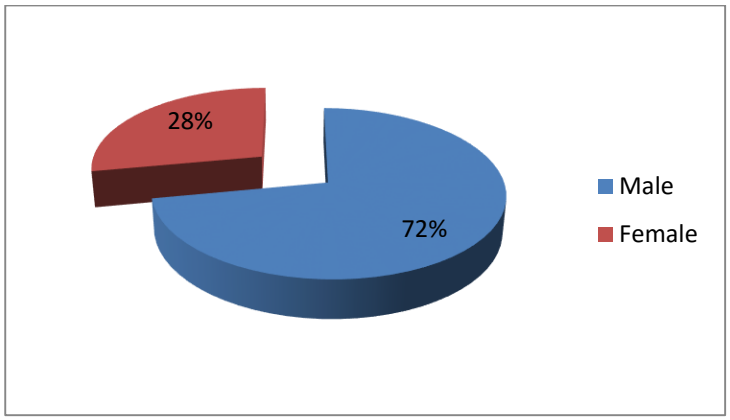
questionnaire was backed by the information collected using the FGDs and interviewing method as qualitative approach to this study.

4.2. Background information of the study population

The background x-tics of the study population among other things included age, sex and level of education. This was done in order to consider respondents who are mature with positions of responsibilities, with minimum level of education (Secondary).

The majority of respondents were males at 72% while female respondents constituted 28% of the total sampled population. Fig 4.1 below shows that the number of males outweighed the female colleagues, an indication that despite women emancipation, women still hold less positions of responsibilities compared to their male colleagues.

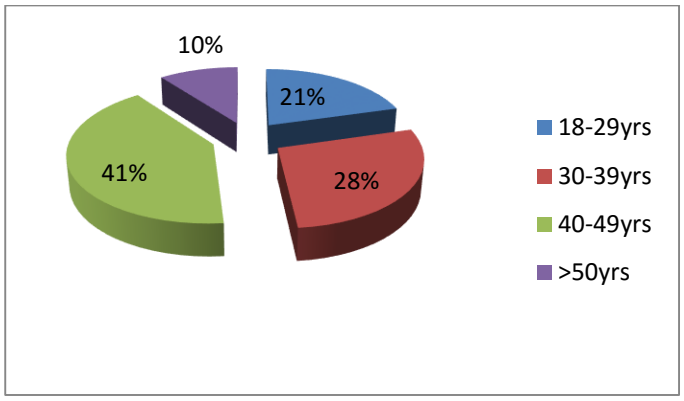
Figure 4.1: Sex of respondents



From researchers point of view, the above implies that although women are engaged in day to day utilization of natural resources for livelihood particularly wetlands in form of gardening, crafts making, medicinal herbs, water collection and others; men still wield enormous powers in areas that affect sustainable management of these natural resources including wetlands, a phenomena that is detrimental to wetland conservation efforts if not checked.

In terms of **age** respondents considered, the sample selection procedure eliminated young respondents (minors) by selecting only the district officials in positions of responsibility conversant with the environment sub sector and political leaders considered to be adults as shown on the figure **4.2** below.

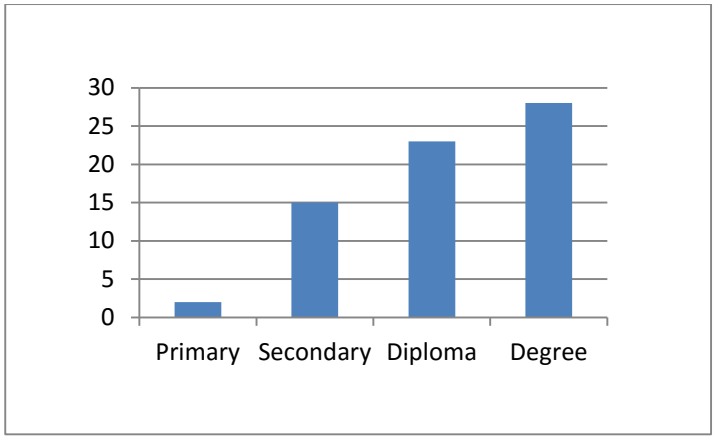
Figure 4.2: Age of respondents



In the figure above, majority of the sampled population fall between 40-49 years while a few respondents fall in the age category above 50years. This is a clear indication that in the age blacket 40-49, thats where most senior officials capable of heading sectors and sub sectors fall while above 50years, many officers are looking at retirement which is currently at 60years. However by comparison, all age groups as shown on the figure 4.2 above are represented in the sampled population and this gives a balanced view of opinions expressed by a cross section of age groups.

Level of education was also considered among the background x-tics of respondents who are believed to be involved in the day to day management of wetland resources. Figure 4.3below shows that the majority of the population understudy(minus those consulted in FGD at LC1) had post primary education standding at 97%. Of these, 22% hold minimum secondary education qualifications and majority if not all in this category are political leaders that hold elective offices at sub county level, 34% of the sampled population had diplomas while 41% had a minimum of undergraduate degree.

Fig.4.3 Level of education



As indicated in fig. 4.3 above, 75% percent of the respondents had atleast diploma education which is an important resource to the district in terms of moderate to high level management while 22% had secondary education, an indication of high literate rate. Only 3% had primary education.

4.3 Empirical results.

The study set out to examine the institutional and legal factors affecting the effective management of wetland resources in a decentralized system of governance in Uganda with the three main objectives and three research questions. Therefore, the researcher's interest at this level is presentation, analysis and interpretation of results based on the objective by objective and to answer the set out research questions in a logical manner.

4.3.1: Funding and effective wetland management in a decentralized system of governance

The first objective of the study was to establish the effect of institutional funding on the effective management of wetlands in a decentralized system of governance in Uganda. To describe the respondent's views on funding for wetland management, the researcher looked at items like; source of funds for wetland management at district level in relation to donor, Central Government or Locally generated revenue, the consistency in budget allocation for wetland management, misallocation levels as well as monitoring and evaluation as shown on table 4.2 below.

Table 4.2: Distribution of respondents views on funding and effective management of wetlands in decentralization setting (N =68)

FUNDING	∂	Mean	SD	D	N	A	SA
Most wetland programmes in the district/sub county are designed and funded by donors	0.939	2.88	3	22	26	14	3
			4%	**32%**	**38%**	**21%**	**4%**
Donor funds are always directed to particular programmes and projects	1.087	3.66	4	7	10	34	13
			6%	**10%**	**15%**	**50%**	**19%**
Donor funding has been critical in providing logistics for sustainable wetland management	0.967	3.57	11	28	19	9	1
			16%	**41%**	**28%**	**13%**	**1%**
Large percentage of funds for wetland management in district/sub county come from central government as conditional grants	1.042	3.75	1	10	11	29	17
			1%	**15%**	**16%**	**43%**	**25%**
Funds from the central government are directed to particular programmes and projects	1.043	3.46	3	10	17	29	9
			4%	**15%**	**25%**	**43%**	**13%**
The central government wetland budget for district through MWE (PAF) keeps on fluctuating	1.111	4.25	3	5	2	20	38
			4%	**7%**	**3%**	**29%**	**56%**
Resources generated and allocated to manage wetlands in district/sub county affect effective wetland management a great deal	0.955	4.21	2	3	4	29	30
			3%	**4%**	**6%**	**43%**	**44%**
The largest percentage of the district's/sub county wetland budget is covered by locally generated resources	0.809	3.13	1	23	29	14	1
			1%	**21%**	**43%**	**34%**	**1%**
A percentage of locally generated resources allocated to management of wetlands/environment has actually been utilized for the same purpose	0.820	3.12	3	10	31	24	-
			4%	**15%**	**46%**	**35%**	**-**
Sustainable wetland management has been treated as a priority in the district's/sub county's resource generation and allocation	1.044	3.99	25	27	7	8	1
			1%	**12%**	**10%**	**40%**	**37%**
Decentralization has enabled the districts/sub county to efficiently deploy resources to priority wetland needs	0.908	4.34	35	27	2	2	2
			51%	**40%**	**3%**	**3%**	**3%**
Monitoring, implementation and evaluation of wetland activities and programmes has been strengthened under decentralization	0.919	2.85	3	22	28	12	3
			4%	**32%**	**41%**	**18%**	**4%**
The central government funds transfer for wetlands at the district is prompt	1.087	3.66	4	7	10	34	13
			6%	**10%**	**18%**	**50%**	**19%**
Facilitation of staff in the wetland sub sector at the district/sub county is adequate	0.968	3.56	11	27	20	9	1
			16%	**40%**	**29%**	**13%**	**1%**
Misallocation/diversion of central government PAF wetland funds at the district has impacted on the management of wetlands	1.038	3.76	1	10	10	30	17
			1%	**15%**	**15%**	**44%**	**25%**
Corruption and embezzlement of wetland funds at the district is common	1.043	3.47	3	10	16	30	9
			4%	**15%**	**23%**	**44%**	**13%**
The wetland sub sector at the district/sub county is the least funded	0.764	3.21	1	11	29	27	
			1%	**16%**	**43%**	**40%**	-

Source: Primary data

∂= standard deviation, SD=Strongly disagree, D= Disagree, N=neutral, A=agree, SA=strongly agree

From the statistics above, it is clear that most of the funds used for wetland management in Mbarara district come from the central government as conditional grants. According to the responses, 67.6% of the respondents admitted that indeed the funding for environment programmes in general and wetlands in particular is largely funded by the central government. This means that these resources are directed to particular programmes in respect to wetland management activities and should therefore not be diverted to other activities. Indeed 56% of the respondents testify to this. This has implications in as far as independent local decision making on matters of effective wetland management is concerned and has indeed compromised on the sustainability of interventions since the funds keep on fluctuating as confirmed by 85% of the respondents. Only 22% and 13 % of the respondents respectively acknowledge that the district/sub counties allocate and prioritize wetland management for local revenue generation and allocation.

It should also be noted that much as the wetland activities in the district are given less priority with respect to funding, the same little funds released are either diverted to other programmes or embezzled, affecting the effectiveness and sustainability of wetland conservation programmes in the district. This is confirmed by the perception of the respondents expressed as a total of 70% and 57% of respondents for diversion and embezzlement respectively.

According to the district budget estimates for the FY 2011/12, a total of shs20bn has been provided for under both recurrent and development expenditure of which only SHS 27.5M is allocated to environment and natural resources sector. This represents 0.13% of the total district's budget. Of the shs27.5M provided for the ENR sector for the FY 2011/12, shs13.296M or 48% shall come from the Central Government as a conditional grant specifically to fund wetlands mgt activities, while shs14.2M (or 52%) is anticipated to come from the locally generated revenue (**Mbarara District budget estimates, FY 2011/12**). It is not clear what percentage of local revenue budgeted for shall be actually

realized going by the trend. No donor funding for wetland management has been provided for in the FY 2011/12, an argument supported by the a wetland officer in an interview who asserts that;

"Donor funding for wetland activities ended in 2009 by BTC and since then, no any other donor has come to support the wetland and environment sector"

The above phenomenon is corroborated by the interviews with political and technical heads who argue that with abolition of Graduated tax (GT), even realizing the 35% of budget allocation for ENR is an uphill task when it comes to implementation.

"Since the abolition of GT in 2007, generating local revenue enough to cater for the councilors' allowances and cover the operation costs of sectors like environment has been the biggest challenge of this district administration".

Says, the District Secretary for Environment. His views are further re affirmed by the head of District Natural Resources sector under whom, the wetland docket falls who says;

"Reliance on Local Revenue (LR) for ENR management is not forthcoming. Even the allocation made in our annual work plans extracted from the 3 year rolling District Development Plan (DDP) is never realized to the fullest, never mind that only a small percentage of less than 5% of the district locally generated revenue is allocated".

The situation, according to the Head Natural Resources who supervises the wetland sub sector has been worsened by the splitting of Mbarara district into four more districts which has affected the local revenue collection greatly.

''Even the Central Government fund transfers under ENR-wetlands component for Mbarara district has been reduced to cater for the new districts originally under Mbarara.'' He concludes.

Table 4.3: Summary of ENR sector funding for Mbarara district in last 4 years.

FYs	LR	CENTRAL GOVT(PAF)	TOTAL ENR BUDGET	TOTAL OUT TURN (%)	
				LR	PAF
2008/9	16,409,886	8,225,000	**24,634,886**	*48%%*	*98.5%*
2009/10	18,662,928	14,757,221	**33,420,149**	*38%*	*98%*
2010/11	11,384,404	11,920,322	**23,304,726**	*35%*	*99.9%*
2011/12	14,234,809	13,296,000	**27,530,809**	*Running*	*Running*

Source: Mbarara District Planning Unit, 2011.

From the statistics above, it is evident that ENR sector in which wetland management falls receives meager funding from locally generated revenue that come to district coffers. Even where it has been budgeted for, in most cases a dismal percentage is realized as indicated on the table 4.3 above. It is evidently clear that there is a declining trend of ENR funding from particularly the District LR sources albeit budgeted for. For example in the FY 2008/9, while shs16.4M was budgeted under LR, only 7.87M or 48% was realized and in the FY 2010/11, the situation was worse with only 35% out turn. The situation is not good either with the Central Government transfers showing more or less stagnant allocation despite rising costs of operation. Where as in the 2009/10, for example sh14.7M was allocated, it declined to shs11.9M in the FY 2010/11, an indication that there is no hope for further increment despite an improvement in the country's GDP and economy for the last 5 or so years.

The researcher used the Pearson's correlation coefficient to test the relationship between funding and management of wetland resources in decentralized system of governance as shown below in table 4.4

Table 4.4: Relationship between funding and effective management of wetland resources in decentralized system of governance

		Effective wetland mgt	Funding
Effective wetland management	Pearson Correlation	1	.473**
	Sig. (2-tailed)		.000
	N	68	68
Funding	Pearson Correlation	.473**	1
	Sig. (2-tailed)	.000	
	N	68	68

**. Correlation is significant at the 0.05 level (2-tailed).

The relationship between funding and effective wetland management was investigated using Pearson product-moment correlation efficient. There was a moderate positive correlation between the two variables($r = .473$; $n = 68$; $p<.000$), with moderate level of funding associated with effective wetland management in decentralized system of governance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.473[a]	.224	.212	.49553

a. Predictors: (Constant), funding

The model summary table displays R, R Square, Adjusted R Squared and the standard error, the R=0.473 is the correlation between observed and predicted values of the dependent variable. The value indicates the direction of the relationship as positive with a moderate relationship. The R^2=.224 (0.224x100) which is 22.4%, is the proportion of variation in the dependent variable explained by the regression model. This means that 22.4% variance in the effective management of wetland resources in a decentralized system of governance is explained by institutional funding.

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.668	1	4.668	19.011	.000[a]
	Residual	16.207	66	.246		
	Total	20.875	67			

a. Predictors: (Constant): Funding

b. Dependent Variable: Effective wetland management

The above anova table indicates that funding predicts the outcome variable of effective wetland management significantly well. This indicates the statistical significance of the regression model between funding and wetland management that was applied, p <000 is less than 0.05 and this indicates that overall, the model applied is significantly good enough in predicting the outcome variable (of effective wetland management)

Coeffecients[a]

Odel		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.422	.482		2.947	.004
	Funding	.592	.136	.473	4.360	.000

a. Dependent Variable: Effective wetland management

The Table above, Coefficients provides information on each predictor variable, it predicts institutional funding from effective wetland management, and both constant and funding contribute significantly to the effective wetland management in decentralized system of governance. Sig.=0.000, the B column under unstandardized coefficients can be used to present the regression equation as:

Y = a + bx where by Effective Wetland Management = 1.422 + 0.592 (funding)

4.3.1.1 Testing the hypothesis one of the study: Funding greatly affects the effective management of wetlands in a decentralized system of governance in Uganda

This was developed basing on objective one; to establish the effect of institutional funding on effective wetland management in a decentralized system of governance in Uganda.

Using Pearson's coefficient of correlation test (r) to establish the bivariate correlation between variable one at 95% confidence level, institutional funding was tested basing on the assumption that it had an association with the effective management of wetland resources in decentralized setting. The alternative hypothesis was tested. The r calculated was found to be 0.473 at 95% confidence level. Therefore hypothesis number one was accepted which implies that funding has positive contribution to effective management of wetland resources in decentralized system of governance.

Test: Pearson's correlation coefficient (r)				
Hypothesis tested		**N**	**R**	**2-tailed p**
Hypo 1	Funding greatly affects the effective management of wetlands in a decentralized system of governance in Uganda.	68	0.473	0.000

From the above table, we can interpret the findings on the hypothesis one tested using the p-value in addition to the r-calculated. Looking at column (2-tailed p), the p value was found to be smaller than significant level of 0.05 which meant that the formulated hypothesis is significant.

4.3.2: Human resource and effective wetland management in decentralized system of governance

The second objective of the study was to examine the effect of institutional human resource on effective wetland management in a decentralized system of governance in Uganda. To describe the respondent's views on the effect of human resource on wetland management in a decentralized setting, staffing levels in the environment and natural resources sector, skills and motivation of personnel towards effective and efficient decentralized wetland management were analyzed as shown on table 4.5 below.

Table 4.5: Distribution of respondents views on the effect of human resources on effective wetland management in decentralized system of governance (N =68)

Human resource	∂	Mean	SD	D	N	A	SA
The department of natural resources at the district has enough staff	0.979	3.90	-	10	6	33	19
			-	15%	9%	48%	28%
The staff employed in the environment department at the district are skilled in the effective management of wetland resources	1.101	2.74	7	30	6	24	1
			10%	44%	9%	35%	2%
Local governments departments are generally adequately staffed	0.732	4.18	1	1	4	41	21
			1.5%	1.5%	6%	60%	31%
The district has a substantive wetland officer to ensure effective wetland management in district	1.040	3.69	-	15	5	34	14
				22%	7%	50%	21%
Human resources in the department of environment management are mindful of the environment	1.126	3.01	6	20	13	25	4
			9%	29%	19%	37%	6%
All personnel provided for in the environment sector staff structure at the district are recruited	1.149	2.59	12	25	13	15	3
			18%	37%	19%	22%	4%
There is continuous training of district/sub county staff in wetland management by the district	1.362	2.76	20	10	6	30	2
			29%	15%	9%	44%	3%
There are designated trained staff at sub county to effectively handle wetland management issues	1.167	2.34	16	32	4	13	3
			23%	47%	6%	19%	4%
The existing personnel in wetland sub sector both at district and sub county is adequately facilitated to effectively manage wetlands	1.359	2.78	9	33	1	14	11
			13%	48%	2%	21%	16%
There is constant supervision of the sub county designated environment focal person by the environment/wetland officer and information sharing	1.315	2.82	8	30	7	12	11
			12%	44%	10%	18%	16%
There is regular reporting by sub county wetland and environment focal persons to the district environment/wetland office	1.355	2.50	24	11	12	17	4
			35%	16%	18%	25%	6%
Specialized staff in the district/sub county are paid allowances for their work	1.532	2.84	22	9	5	22	10
			35%	16%	18%	25%	6%
Remoteness of the district/sub county makes the attraction of personnel difficult	1.337	2.13	29	20	8	3	8
			43%	29%	12%	4%	12%
There is lack of qualified people to replace those retiring or moving on	1.157	3.78	18	34	3	9	4
			27%	50%	4%	13%	6%
The district has competent and sufficient human resources to manage technical aspects of wetland programming and management	1.217	2.66	13	24	6	23	2
			19%	35%	9%	34%	3%
Technical support from the central government (MWE) is adequate in ensuring effective management of wetland resources	1.328	3.24	14	2	15	28	9
			21%	3%	22%	41%	13%
The district/sub county has in place mechanisms to enforce public sector standing orders on staff performance and discipline	1.038	3.76	2	8	10	32	16
			3%	12%	13%	47%	23%

Source: Primary data

From the assessment of human resource in terms of staffing levels, a total of 76% of the respondents believe that the district has enough staff to handle effective wetland management activities. More so the district has a substantive wetland officer which was confirmed by 70.5% of the respondents. Although, the personnel provided for in the environment and wetland sector staff structure at the district are not all recruited as confirmed by 54% of the respondents, it can be said that with adequate facilitation of the existing personnel in the department and designation of sub county focal point persons to take care of day today management of wetland resources, a lot would be achieved in as far as effective and sustainable management of wetland resources is concerned. This view is shared by one of the Assistant Chief Administrative Officer of Mbarara district who has acted as Deputy CAO for substantial period. In his submission during the interview, he says

" *As far as the district is concerned, there is no need of recruiting more personnel in the ENR dept like the missing Senior and Junior Environment officers provided for in the structure, when we cannot even facilitate the two officers responsible for environment currently i.e. DNRO and DWO. If the resources were available, there are many officers at sub counties who would be designated and trained in environment and wetland aspects to handle natural resource management issues at lower local government levels. Indeed the district took an effort to designate sub county environment focal point persons in 2009 but since then, these officers are still redundant since they lack facilitation to perform*". He concludes.

It should be noted that Mbarara district is not a remote area that would make attraction of specialized personnel in natural resource management difficult neither is there lack of qualified persons to replace the retiring ones and those moving on and this cannot therefore be a reason for failure by the district to recruit staff provided for in the ENR structure. The respondents attest to this by 72% and 76% respectively.

The researcher in attempt to find out whether actually there are personnel at lower local government level that manages day today aspects of wetland, 70.5% of the respondents objected to the statement, confirming the Deputy CAOs fears of redundancy of designated environment/wetland officers at that level.

The same sentiments were shared by some of LC 1 committee executives during the FGDs. Accordingly; two questions were asked whether the members were aware of having an environment/wetland officer at the sub county and how regularly he/she conducted sensitization meetings in the villages/parishes on wetland issues. Majority of the committees' members the researcher interacted with admitted ignorance of such an officer at Sub County. One of the committee members of Local Council One for Mugarutsya village had this to say:

"*My village borders Koga wetland, one of the major tributaries of River. Rwizi that passes through Mbarara town, some rich men in the area have been converting this wetland into eucalyptus plantations, fishing ponds and farming BUT I had never seen any wetland officer from either the district or Sub County inspecting this area to curb these irregularities".*

When the researcher sought more clarification on the role of secretary for environment at the committee who would in this case provide information to relevant authorities! *The* Secretary for environment for the same village interjected:

"Sir, how do you expect me to communicate to those officers that I don't even know, let alone use my airtime that can't be refunded?"

The above views were generally cross cutting among the FGDs that were held and this highlights the grave challenges faced with sustainable wetland management specifically and environment in general in a decentralized system of governance.

In terms of skills for the effective management of wetlands in the district, 54% of the respondents think that the staffs lack requisite skills to sustainably manage wetland resources in the district. The

inadequate facilitation and lack of continuous training and capacity building programmes for the staff to keep them abreast with the emerging issues in effective wetland management and conservation greatly impacts on effectiveness of wetland management in the district. This is confirmed by 62% and 44% of respondents respectively. A question on whether existing personnel in wetland sub sector both at district and sub county is adequately facilitated to effectively manage wetlands was posed to which 9 respondents strongly disagreed and 33 respondents disagreed totaling to 62% of the total respondents who returned the questionnaires. Likewise an affirmative question on the continuous training of district/sub county staff in wetland management by the district was asked to which the 20 respondents strongly disagreed and 10 respondents disagreed making the total objection to the question 44% of total responses. Although the similar percentage of respondents agreed to the statement of continuous training of wetland personnel, from DWO,

"It is an individual effort for one to get training opportunity especially in wetland management since it's not a priority in this district"

commented when asked about capacity building opportunities.

The documentary review of the annual ENR sector work plan and budget for the year 2011/12 shows no capacity building programmes have been planned/budgeted for, an indication that it is not a priority since budget ceilings could not allow.

Staff motivation under human resource factor was another variable investigated in as far as effective wetland management is concerned at Local Government level. A total of 43% of the respondents believe the personnel at the district responsible for wetland management are mindful of the environment and actually love their jobs where as 19% of the respondents are not aware of the staff perception to their jobs. Motivation was further measured with questions on whether there is adequate facilitation, continuous training, technical support from the central Government and regular

supervision. The respective respondent's perceptions included 62%, 44%, 23.5% and 56% who disagreed to the statements.

Records from the district human resource department indicate that only 79% of the approved human structure is filled. Mbarara district is grade module 2 according to the Ministry of public service grading system.

Table: 4. 6: Distribution of staff in the ENR sector for Mbarara district

NO	POSITON	Approved ENR staff structure	No of staff recruited
1	District Natural Resource Officer	1	1
2	Senior Environment Officer	1	-
3	Senior Lands Officer	1	-
4	Senior Forest Officer	1	1
5	Senior Physical Planner	1	-
8	Environment Officer	1	-
9	Pysical planner	1	-
10	Lands Officer	1	1
11	Wetland Officer	1	1
12	Land Valuer	1	-
13	Forest Rangers	2	1
14	Cartographer	1	1
15	Forest guards	2	-
16	Registrar of titles	1	1
17	Office attendants	2	2
18	Copy typist	2	1
19	Assistant records	2	1
Total		**22**	**11**

Source: Mbarara district staff establishment, 2010

From the district records, it was established that where as the ENR sector in which the wetlands management component falls is supposed to have 22 staff, only 11 exist. This is 50% compared to the district staff establishment at 79%. This is a clear indication that the ENR sector is not a priority in the district in as far as staff placement is concerned and this is corroborated by limited funding.

The researcher used the Pearson's correlation coefficient to test the relationship between human resource and management of wetland resources in decentralized system of governance as shown below in table 4.7

Table 4.7: Relationship between human resources and effective management of wetland resources in decentralized system of governance

		Effective wetland management	Human resource
Effective wetland management	Pearson Correlation	1	.422**
	Sig. (2-tailed)		.000
	N	68	68
Human resource	Pearson Correlation	.422**	1
	Sig. (2-tailed)	.000	
	N	68	68

**. Correlation is significant at the 0.05 level (2-tailed).

The relationship between human resource in terms of skills, staffing levels and motivation and effective wetland management was investigated using Pearson product-moment correlation efficient. There was a moderate positive correlation between the two variables($r = 0.422$; $n = 68$; $p<.000$), implying that moderate level of institutional human resource is associated with effective wetland resources management in decentralized system of governance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.422[a]	.178	.166	.35089

a. Predictors: (Constant), human resource

The model summary table displays R, R Square, Adjusted R Squared and the standard error, the R=0.422 is the correlation between observed and predicted values of the dependent variable (effective wetland management). The value indicates the direction of the relationship as positive with a moderate

relationship. The R^2=0.178 which is 17.8%, is the proportion of variation explained by the human resource factor in the effective wetland resources management in decentralized setting.

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.760	1	1.760	14.294	.000[a]
	Residual	8.126	66	.123		
	Total	9.886	67			

a. Predictors: (Constant), human resource

Dependent Variable: Effective wetland management

The above anova table indicates that human resource capital affects effective wetland management significantly. This is indicated by the statistical significance of the regression model between human resource and effective wetland management that was applied where p <000 is less than 0.05 an indication that overall; the model applied is significantly good enough in predicting the outcome variable of effective wetland management in decentralized system of governance.

Coefficients

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.998	.283		7.069	.000
Human resource	.352	.093	.422	3.781	.000

Dependent Variable: Effective wetland management

The Table above, Coefficients provides information on each predictor variable, it predicts human resource from effective wetland management, and both constant and human resource contribute significantly to the wetland management in decentralized system of governance. Sig.=0.000, the B column under unstandardized coefficients can be used to present the regression equation as:

Y = a + bx where by Effective Wetland Management = 1.998 + 0.352 (human resource)

4.3.2.1 Testing hypothesis two: Institutional human resource does not affect the effective management of wetlands in a decentralized system of governance in Uganda (null hypothesis).

This was developed basing on objective two; to examine the effect of institutional human resource on effective wetland management in a decentralized system of governance in Uganda.

Using Pearson's coefficient correlation test (r) to establish the bivariate correlation between variable two at 95% confidence level, human resource was tested basing on the assumption that it does not affect the effective management of wetland resources in decentralized setting. The alternative hypothesis was tested. The r calculated was found to be 0.422 at 95% confidence level. Since the results indicate a moderate and positive relationship between institutional human resource and effective wetland management in a decentralized setting, the hypothesis number two was rejected, which implies that human resource indeed has positive contribution to effective wetland management in decentralized system of governance.

Test: Pearson's correlation coefficient (r)				
Hypothesis tested		**N**	**R**	**2-tailed p**
Hypo 2	Institutional human resource does not affect the effective management of wetlands in a decentralized system of governance in Uganda.	68	0.422	0.000

From the above table, we can interpret the findings on the hypothesis two tested using the p-value in addition to the r-calculated. Looking at column (2-tailed p), the p value was found to be smaller than significant level of 0.05 which meant that the formulated hypothesis is significant. This is the reason the researcher rejected hypothesis two of the study basing on the above findings.

4.3.3: Legal framework and effective wetland management in decentralized system of governance

The last objective of the study was to assess the effect of the existing laws on the effective management of wetlands in a decentralized system of governance in Uganda. To describe the respondent's views on the effect of legal framework on effective wetland management in a decentralized setting; the international, national and local legal frameworks were analyzed as shown on table 4.8 below.

Table 4.8: Distribution of respondents views on the effect of legal framework on wetland management in decentralization setting (N =68)

Legal framework	∂	Mean	SD	D	N	A	SA
There are ample laws, policies and regulations in Uganda to adequately regulate the use of wetland resources in the country	1.465	4.06	10	3	1	13	41
			15%	4%	2%	19%	60%
Some of the provisions in environment/wetland laws and regulations in Uganda have outlived their purpose and intent.	1.035	3.63	3	9	8	38	10
			4%	13%	12%	56%	15%
All the laws whether on environment or otherwise in Uganda are implemented/enforced	1.410	2.66	15	26	5	11	11
			22%	38%	7%	16%	16%
Most of the laws on wetlands specifically are fragmented and scattered across other legal art pieces	0.997	3.57	3	5	21	28	11
			4%	7%	31%	41%	16%
The provisions in the existing environmental laws regarding wetlands ownership, use and access are adequate and straight forward	1.396	3.43	9	11	9	20	19
			13%	16%	13%	30%	28%
Generally environmental/wetland laws and regulations are strong and provide for heavy punishments	1.337	2.63	15	25	5	16	7
			22%	37%	7%	24%	10%
Institutions responsible for the enforcement of environmental/wetland laws and regulations have enough financial and technical capacity to do so	1.259	2.29	17	35	3	5	8
			25%	51%	4%	7%	12%
All the existing legal and policy provisions on environment/wetlands are consistent with other sector laws like agriculture act, water act etc	1.213	3.43	9	6	8	37	8
			13%	9%	12%	54%	12%
There is persistent compliance to environment and wetland laws in the district/sub county	1.396	2.69	18	18	6	19	7
			26%	26%	9%	28%	10%
The communities appreciate the value and functions of wetlands at the district/sub county level.	1.281	2.96	10	20	6	26	6
			15%	30%	9%	38%	9%
The district wetland officer and sub county environment focal officers are adequately empowered to enforce the existing laws	1.262	2.34	19	26	8	8	6
			28%	38%	12%	12%	9%
There is a fully constituted Local Environment Committee at sub county/division to supervise environment/wetland activities	1.148	3.24	4	20	6	32	6
			6%	29%	9%	47%	9%
All existing Local environment committees at the sub county/division are functional	1.085	2.54	6	39	8	10	5
			9%	57%	12%	15%	7%
The enforceability of some of the statutory provisions in environment/wetland laws and regulations is practical	1.165	3.04	5	25	4	30	4
			7%	37%	6%	44%	6%
There is a clear demarcation between the roles, responsibilities and powers of Local government, central government and other agencies like NEMA	1.187	3.41	4	15	10	27	12
			6%	22%	15%	40%	17%
The district/sub county has byelaws and ordinances to guide effective wetland management and conservation	1.250	2.93	7	27	5	22	7
			10%	40%	7%	32%	10%
There is some political will in the district/sub county to enforce the existing laws and regulations on wetlands	1.318	3.41	1	27	3	17	20
			2%	40%	4%	25%	29%
Corruption of law enforcement officers affects the genuine enforcement of wetland laws in the district/division	1.223	3.24	4	21	9	23	11
			6%	31%	13%	34%	16%
The existing legal framework on wetlands/environment provides incentives for active community participation in observation and enforcement of laws and regulations	1.167	2.34	16	31	7	10	4
			23%	46%	10%	15%	6%

Source: Primary data

From the above analysis, it is understandable that whereas the country has a number of laws and policies in place for environment management and wetlands specifically as confirmed by 79% of the respondents, enforcement is poor with 60% attesting to the fact that the laws in Uganda whether on environment or other sectors are just good on paper with no practical enforcement. 71% of the respondents believe that the existing wetland/environmental laws have outlived their purpose and cannot therefore be used effectively to regulate sustainable management of wetland resources in the country. Furthermore 59% of the respondents believe that the current wetland laws are weak and do not provide for strong punishments which is the reason for increased violation of the said laws.

Quoting NEA, Cap 153, section 36, and National Environment (Wetlands, riverbanks and Lakeshores Management) Regulations, 2000 made there under, a top district leader had this to say;

''The law says that no drainage of wetlands is permissible unless a wetland use permit is obtained from NEMA, subject to EIA. However the penalty provided for contravention of this legal provision is not deterrent enough as it provides for the imprisonment of a term not exceeding 3months or a fine of not more than shs3m. This is just not serious enough and unless such provisions are revised to be more strong, wetlands shall continue to be degraded''

Matters are worsened by inconsistency of the law with decentralization policy and Local Government Act, 1997 as advanced by a Wetland Officer hence,

''According to the NEA, Cap 153, only Environmental Inspectors gazzeted by NEMA are eligible to enforce the environment/wetland related law, yet the Local Government Act decentralized management of natural resources including wetlands with such powers to enforce the relevant legislation. Even where the environment/wetland officers have been gazetted Environmental inspectors, powers are still limited to only issuing improvement notices and not restoration orders to degraders."

This leaves the district officials in dilemma and in most cases degraders have taken advantage of such loopholes in the law to degrade wetlands with impunity or even drag the district officers attempting to enforce the law to courts of laws on trespass charges.

Furthermore, the specific lack of wetland law in the country is another setback to effective enforcement of the wetland legislation. At the moment, all wetland legislation is scattered across various legal art pieces as confirmed by 57% of the respondents. This makes it difficult for some district officers to trace, let alone evoke such provisions in ensuring effective and sustainable wetland management. According to the District Planner;

''Whereas there is a wetland policy in place, the lack of related law to enforce the said policy hampers the district's efforts to adequately address the silent issues related to wetland management in addition to funding. It is the reason most district Environment/Wetland Officers employed by the districts under decentralization pay more allegiance to NEMA than the employer simply because they are implementing the NEA, 1995that established NEMA. Unless the wetland sub sector comes up with the sector specific law, the challenges being experienced today in wetland management shall continue to exist. It's high time the Sector Ministry responsible for wetlands management comes up with the wetland law to curb the rampant wetland degradation in the country.''

Some of the legal frameworks where wetlands management feature include; the Constitution (1995), the Water Act (1996), the Land Act (1998), the NAADS Act (2001), the National Environment (wetlands, Riverbanks, and Lake shores) Regulations (2000), National Environment Management policy (1994), EIA regulations (1998) among other policies and laws.

Despite the presence of fully constituted District and Local Environment Committees as established by NEA, Cap 153 Sections 14 and 16 at both the District and Sub County levels supposed to oversee the implementation of the wetland policies and laws; an argument confirmed by 56% of the respondents,

these committees and other institutions at large, lack adequate financial and technical capabilities to perform their roles and responsibilities. Accordingly, 76% of respondents strongly believe that the institutions responsible for wetland management lack financial capacity to implement the existing laws while 66% believe that the sub county wetland focal point persons and district wetland officer are not adequately empowered to enforce the wetland policies and laws. Indeed the same percentage of respondents 66% agree to non functionality of district and local environment committees despite being constituted.

During the FGDs with local council one committees, the issue of 'white elephant' institutions particularly Local environment committees (LECs) at sub county level came out vividly. In Rubindi Sub County for example, in Kigango village, members were concerned with the continuous unabated wetland degradation in Rubindi trading center even after informing the sub county wetland focal point person and LEC members of the imminent disappearance of vital wetland system in the sub county.

" *These so called focal persons are just employed to earn salary while seated and extort money from wetland degraders to allow them continue with their activities, exclaimed a defense secretary for Kigango LC one council".*

His fears seem to be confirmed by the perceptions of the respondents in which 50% and 54% respectively think that corruption of enforcement officers and lack of political will has affected enforcement of environmental laws in the district to the detriment of the environment.

The situation is not helped by lack of wetland related bye-laws and district ordinance to supplement the national laws as well as lack of incentives by the existing national and international legal frameworks to attract community participation in observation and enforcement of wetland laws and regulations. 50% and 69% respectively attest to this.

In an interview with the head of district natural resources, he cites lack of commitment by the district political leaders to have the District Environment Protection Ordinance initiated in 2004 passed.

"The district Environment Protection Ordinance bill was initiated in 2004, but to date, it has failed to be passed by the district council which is mandated to formulate policies. As a result it has been overtaken by events and needs fresh consultations to capture the emerging issues; yet there is no funding to undertake this expensive exercise. He adds, the department of natural resources with funding from PAF recently undertook the restoration exercise of heavily degraded wetlands in Bugamba and Ndeija Sub Counties of Mbarara district forcefully after several sensitization meetings, but to my dismay, even the H.E the president of the republic of Uganda came out to condemn the exercise as illegal after receiving reports from local politicians".

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From the expression of the above implementer of wetland law in the district, it is vividly clear that the political will in the district is lacking as confirmed by 54% of the respondents and that's the reason such an important piece of district legislation (read ordinance) can take more than 10 years being drafted with no success, let alone political interference during the enforcement of the existing legislation.

The researcher used the Pearson's correlation coefficient to test the relationship between legal framework and management of wetland resources in decentralized system of governance as shown below in table 4.9

Table 4.9: Relationship between legal framework and management of wetland resources in decentralized system of governance

		Legal framework	Effective wetland management
Legal framework	Pearson Correlation	1	.461**
	Sig. (2-tailed)		.000
	N	68	68
Effective wetland management	Pearson Correlation	.461**	1
	Sig. (2-tailed)	.000	
	N	68	68

**. Correlation is significant at the 0.05 level (2-tailed).

The relationship between legal framework and effective wetland management was investigated using Pearson product-moment correlation coefficient. There was a strong positive correlation between the two variables($r = .461$; $n = 68$; $p<.000$), implying that international, national and local legal framework is strongly associated with the effective wetland management in decentralized system of governance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.461[a]	.212	.200	.34350

Predictors: (Constant), legal framework

The model summary table displays R, R Square, Adjusted R Squared and the standard error. The R=0.461is the correlation between observed and predicted values of the dependent variable effective wetland management. The value indicates the direction of the relationship as a positively strong relationship. The R^2= 0.212 which is 21.2%, is the proportion of variation in the effective wetland management explained by the legal framework.

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.099	1	2.099	17.786	.000[a]
	Residual	7.788	66	.118		
	Total	9.886	67			

a. Predictors: (Constant): Legal framework

b. Dependent Variable: Effective wetland mgt

The above anova table indicates that legal framework affects effective wetland management significantly. This is indicated by the statistical significance of the regression model between legal framework and effective wetland management that was applied where p <000 is less than 0.05, an indication that overall; the model applied is strong enough in predicting the outcome variable (of effective wetland management) in decentralized system of governance.

Coefficients[a]

Model		Un standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.070	.237		8.722	.000
	Legal framework	.323	.077	.461	4.217	.000

a. Dependent Variable: Effective wetland management

The Table above, Coefficients provides information on each predictor variable, it predicts legal framework from effective wetland management. Both constant and legal framework contributes significantly to the effective wetland management in decentralized system of governance. The B column under unstandardized coefficients can be used to present the regression equation as:

Y = a + bx where by Effective Wetland Management = 2.070 + 0.323 (Legal framework)

4.3.3.1 Testing hypothesis three: The existing legal framework affects effective wetland management in decentralized setting in Uganda.

This hypothesis was derived from the objective three of the study thus; to assess the effect of the existing laws on the effective management of wetlands in a decentralized system of governance in Uganda.

Using Pearson's coefficient correlation test (r) to establish the bivariate correlation between variable three at 95% confidence level, legal framework was tested basing on the assumption that it had an effect on the effective management of wetland resources in decentralized setting. The alternative hypothesis was tested. The r calculated was found to be 0.461 at 95% confidence level. Since the results indicate a strong and positive relationship between legal framework and effective wetland management in a decentralized setting, the hypothesis number three of the study was accepted, which implies that indeed legal framework in terms of international, national and local context has a strong and positive relationship with effective wetland management in decentralized system of governance.

Test: Pearson's correlation coefficient (r)				
Hypothesis tested		**N**	**R**	**2-tailed p**
Hypo 3	The existing legal framework affects effective wetland management in decentralized setting in Uganda	68	0.461	0.000

From the above table, the findings on the hypothesis three of the study can be interpreted using the p-value and the r-calculated. Looking at column (2-tailed p), the p value was found to be smaller than significant level of 0.05 which meant that the formulated hypothesis is significant. It is for this reason that the researcher accepted hypothesis three of the study based on the above findings.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the findings, discussions, conclusions and recommendations of this study. The researcher also highlights the areas where future research on wetland management could be conducted in this section.

5.1 Summary

The study set out to examine the institutional and legal factors affecting the effective management of wetland resources in decentralized system of governance in Uganda with a case study of Mbarara district. It was based on three objectives on which the summaries presented here below are based.

5.1.1 Funding and effective wetland management in decentralized setting

The first objective was to investigate the effect of funding on effective wetland management in a decentralized system of governance in Uganda. The research undertaken established that indeed funding has a moderate to strong positive relationship with wetland resources management in a decentralized setting. It was found out that more than 70% of the environment budget for Mbarara district comes from Central Government as conditional grant. 68% of the respondents confirmed this. Sixty four (64%) of the study population results show that wetland management budget is not covered by the district locally generated resources yet according to 87% of the respondents, this greatly affects effective wetland management in the district. The problem is further compounded by the fact that even the small funds allocated to ENR sector in the district are never fully realized. For instance during the FYs 2009/10 and 2010/11, while dismal allocations of shs7.1M and shs4.8M were made, only 28% and 20% respectively were realized.

This means that the district solely depends on the central Government transfers in wetland management which are conditional in nature and keep on fluctuating. This defeats the whole concept of decentralization where independent local decisions should be made based on the local challenges with local resources.

The Pearson's correlation coefficient results (r=0.473, p=0.000) showed a significant relationship between funding and effective management of wetland resources in a decentralized setting, hence the researcher accepting the hypothesis under study.

5.1.2 Human resource and effective wetland management in decentralized setting

The second objective of the study was to examine the effect of human resource on effective wetland management in a decentralized system of governance in Uganda. In terms of staffing, it was found out that the department of environment and natural resources is understaffed currently at 50% of the approved staffing structure. This was confirmed by 54% of the study results. From the district human resource records, the district average staffing levels are currently at 79% compared to the ENR's 50%, implying that ENR and wetlands specifically is not a priority sector in the district.

Mbarara district is strategically located in south western Uganda and is one of the country's highly populated urban centers with all social amenities available. It is therefore strategically placed to attract highly qualified personnel in all its sectors, therefore the question of remoteness and lack of qualified skilled personnel to replace those retiring or moving on does not arise. The research findings attest to this with 72% and 76 respectively.

Likewise, skills development which is a crucial component of staff performance and productivity in the district was found to be inadequate. Koontz and Weihrich (2005) argue that performance means

productivity which is defined as output-input ration within a time period, with due consideration for quality. It basically refers to efficiency and effectiveness of an individual in an organizational operation. However for this to happen, the personnel need the technical and analytical skills compounded by motivation. Fifty four (54%) of the research results indicate that the district wetland personnel lack requisite skills to effectively and sustainably manage wetland resources in the district. The inadequate facilitation and lack of continuous training and capacity building programmes for the staff to keep them abreast with the emerging issues in wetland management and conservation greatly impacts on effectiveness of wetland management in the district as shown by 62% and 44% of respondents respectively.

Staff motivation under human resource was another variable investigated in as far as effective wetland management is concerned at Local Government level. A total of 43% of the respondents believe the personnel at the district are mindful of the wetland conservation whereas 19% of the respondents are not aware of the staff perception to their jobs. Motivation was further measured with questions on whether there is adequate facilitation, continuous training, technical support from the central Government and regular supervision. The respective respondent's perceptions included 62%, 44%, 23.5% and 56% who disagreed to the statements.

Motivation of staff in the wetland sub sector at the district, according to the research findings seems to be inadequate and this explains slow response rate to wetland abuse cases rampant in the district. According to Viteles, (1953), cited by Chandan (1997: 325) "motivation" represents an unsatisfied need which creates a state of tension or disequilibria, causing the individual to move in a goal directed pattern towards restoring a state of equilibrium by satisfying the need". Only 43% of the respondents interfaced with think that the district personnel responsible for wetland management are mindful of the environment and actually love their jobs, where as 62% still believe that inadequate facilitation of the

staff in wetland sub sector has irreversibly affected wetland resources management in the district to the limit. With limited opportunities for capacity building and inadequate technical support from the Central Government as shown by the research results of 44% and 23% respectively, all of which have a bearing on staff motivation, effective wetland management still remains at the peripheral of the Country's, let alone the district's priority list, rendering it incapacitated to provide goods and services for the benefit of all citizens.

The Pearson's correlation coefficient results (r=0.422, p=0.000) showed a significant relationship between human resource factor and effective management of wetland resources in a decentralized system of governance. The research hypothesis was therefore subsequently rejected and the alternative hypothesis accepted.

5.1.3 Legal framework and effective wetland management in decentralized system of governance

To understand whether legal framework in the context of international, national and local laws has any effect on the effective management of wetland resources in a decentralized system of governance, a Pearson's correlation coefficient test was undertaken and the results (r=0.461, p=0.000) indicate that there is indeed a significant relationship between legal framework and effective wetland management in a decentralized country like Uganda.

According to the research findings, it was found out that although Uganda as a country has a number of laws and policies in place for environment management; their enforceability is still farfetched with 60% of the respondents agreeing to this. Not only is the enforcement of these environmental/wetland laws weak, but it's also argued that some of the laws have indeed become obsolete and outlived their intent in the current situation and hence irrelevant to regulate sustainable management of wetland

resources in the country. This is indeed attested to by the 71% of the research respondents interfaced with. Furthermore fifty nine (59%) of the research results indicate that the current wetland laws are weak and do not provide for strong punishments which is the reason for increased violation of the said laws.

The lack of wetland specific law in the country was found out to be another setback to effective enforcement of the wetland legislation. Fifty seven (57%) of the research respondents agree to the fact that wetland legislation is scattered across various legal art pieces which is an impediment for some district wetland officers and public at large to access, interpret and evoke such provisions in regulating sustainable wetland management.

Where such vacuum of inadequacy in wetland legislation would be addressed by the district councils by way of formulating local byelaws and district ordinances to regulate the wetland use access and management, the situation is not better at the district level either. Fifty four (54) of the research respondents strongly believe that there is lack of political will and commitment to come up with such local policies aimed at regulating sustainable wetland management. The Mbarara district Environment Protection Ordinance Bill initiated in the year 2004 has not been passed to date, says the District Natural Resources Officer. This clearly indicates lack of political will for the effective management of wetland resources in the district.

5.2 Discussion of the findings

5.2.1 Funding and effective wetland management in decentralized setting

The findings of the study indicate that there is inadequate funding for effective wetland resources management at local government in terms of Central government transfers, local revenue and donor funding. The relationship between funding as an independent variable and effective wetland

management in a decentralized setting was found to be positive and significant which conforms to what was earlier conceptualized in chapter one and also upholding the hypothesis that Institutional funding greatly affects the effective management of wetlands in a decentralized system of governance in Uganda.

Interviews conducted by the researcher confirmed acute funding problems in natural resources sector at local government level both in terms of local revenue sources and central government funds transfer as this is captured in words of one of the key respondents that ‘‘

“Since the abolition of GT in 2007, generating local revenue enough to cater for the councilors’ allowances and cover the operation costs of sectors like environment has been the biggest challenge of this district administration”.

Another key respondent had this to say,

“Reliance on Local Revenue (LR) for ENR management is not forthcoming. Even the allocation made in annual work plans extracted from the 3 year rolling District Development Plan (DDP) is never realized to the fullest, never mind that only a small percentage of less than 5% of the district locally generated revenue is allocated”.

These findings concur with earlier studies conducted by Nyangabyaki, (2003) who stresses that although Local governments are supposed to use their own local resources to put in place environmental institutions, such as district environment committees and sub-county environmental committees, as stipulated in the law, and to develop environmental plans, a few have succeeded in doing so. According to Nyangabyaki, (2003), environmental issues are not a priority area for majority of the local governments; they are merely forced onto the districts. The districts that have made progress in effective natural resources management and wetlands specifically have done so due to the donor support. This view is further shared by Soderstrom (2003) who argues that the biggest challenge facing effective wetlands management in Africa is donor dependence syndrome which affects sustainability.

The findings further reveal heavy reliance on central government transfers through Poverty Action Fund (PAF) to support wetland management activities in the district. Indeed 68% of the respondents confirmed this. This also has its implications on local decision making and long term sustainability; which fears are echoed by Robinson, 2007 hence "decentralization in Africa has often failed, despite promising discourses, because of the over centralization of resources, limited transfers to sub national governments, a weak local revenue base, lack of local planning capacity, limited changes in legislation and regulations, and the absence of meaningful local political process". Through the interview with district officials, one of the key respondents had this to say;

''Even the Central Government fund transfer under ENR-wetlands component for Mbarara district has been reduced to cater for the new districts originally under greater Mbarara.''

It should be noted that for many years running to date, the national ceiling for Local Government funds transfer under PAF for ENR(wetlands) has not increased and yet the number of districts continue to rise year in year out. This has greatly affected the districts that are eventually split, since the same resource envelope is split to cater for the emerging districts as this has been the case with Mbarara district.

5.2.2 Human resource and effective wetland management in decentralized setting

From the research findings, it was found out that there are a number of deficiencies in human resource capacity at local government levels to effectively manage wetland resources in a more equitable, sustainable and accountable manner. This was in sharp contrast to the hypothesis two of the study which stated that: - Institutional human resource does not affect the effective management of wetlands in a decentralized system of governance in Uganda. As per the results of hypothesis testing, the alternative hypothesis proved otherwise and the researcher found out that there is indeed a positive and

moderate relationship between institutional human resource in terms of staffing, motivation and skills and effective wetland management in decentralized system of governance.

The research findings indicate that the department of environment and natural resources where wetlands sub sector falls is under staffed currently at 50% of the approved structure. This, compared to the entire Mbarara district average staffing levels currently at 79%, implies that ENR and wetlands specifically is not a priority sector in the district. The interviews conducted by the researcher confirmed this by noting in the words of one of the key respondents from the district administration that ‘‘

“ *As far as the district is concerned, there is no need of recruiting more personnel in the ENR dept like the missing Senior and Junior Environment officers provided for in the structure, when we cannot even facilitate the two officers responsible for environment currently i.e. DNRO and DWO. If the resources were available, there are many officers at sub counties who would be designated and trained in environment and wetland aspects to handle natural resource management issues at lower local government levels. Indeed the district took an effort to designate sub county environment focal point persons in 2009 but since then, these officers are still redundant since they lack facilitation to perform*”

From the observation above, it is clear that the funding factor still plays a big role in the recruitment of sufficient personnel to handle wetland management at district level. The above view is supported by Saito (2002) who stresses that at the service delivery level of LC3 administration unit, there is no specifically designated environmental/wetland officer and as such, they often have to depend on other extension staff like veterinary officers and agricultural extension officer who already face transport constraints.

According to Koontz and Weihrich (2005) performance basically refers to efficiency and effectiveness of an individual in an organizational operation and for this to happen, the personnel need the technical and analytical skills compounded by motivation. The research findings indicate that the district wetland

personnel lack requisite skills to effectively and sustainably manage wetland resources in the district. The inadequate facilitation and lack of continuous training and capacity building programmes for the staff to keep them abreast with the emerging issues in wetland management and conservation greatly impacts on effectiveness of wetland management in the district. As one of the key respondents in natural resource department put it;

"It takes an individual effort for one to get training opportunity especially in wetland management since it's not a priority in this district", commented when asked about capacity building opportunities.

5.2.3 Legal framework and effective wetland management in decentralized system of governance

The findings of the study indicate that there is inadequate and weak legal framework both nationally and locally to safeguard sustainable management of wetland resources at local government level in Uganda. The relationship between legal framework and effective wetland management in a decentralized setting was found to be positive and strong which conforms to what was earlier conceptualized in chapter one and also upholding the hypothesis that the existing legal framework affects effective wetland management in decentralized setting in Uganda.

The research findings indicate that Uganda has a number of laws and policies in place for environment management as attested to by 60% of the respondents, although their enforceability is still farfetched. These findings concur with earlier studies conducted by Apunyo(2006) who agrees that the effective implementation of wetland laws in Uganda is faced with a number of limitations and challenges particularly political interference. Political interference features prominently in the FGDs, interviews as well as self administered questionnaires that the researcher used to collect information from the participants. In the words of one of the key respondents;

"The department of natural resources with funding from PAF recently undertook the restoration exercise of heavily degraded wetlands in Bugamba and Ndeija Sub Counties of Mbarara district forcefully after several sensitization meetings, but to my dismay, even the H.E the president of the republic of Uganda came out to condemn the exercise as illegal after receiving reports from local politicians".

Bazaara (2003) argues that although the Local Government Act of 1997gives powers to district councils and city councils to make ordinances and bye-laws without reference to or seeking permission from the central government provided those bye-laws do not conflict with the national constitution or other laws, a few Local Governments have come up with such important pieces of legislation particularly with regard to Wetland management. This leaves most district technocrats with only option of implementing the nationally drafted laws that may not be applicable to local circumstances. In an interface with one of the top district technocrat, he had this to say;

"The district Environment Protection Ordinance bill was initiated in 2004, but to date, it has failed to be passed by the district council which is mandated to formulate policies. As a result it has been overtaken by events and needs fresh consultations to capture the emerging issues; yet there is no funding to undertake this expensive exercise".

The research findings further indicate lack of wetland sector specific law in the country which is another setback to effective management of wetland resources. At the moment, all wetland legislation is scattered across various legal art pieces such as NEA, cap 153, The constitution (1995), the Water Act (1996), the Land Act (1998), the NAADS Act (2001), the National Environment (wetlands, Riverbanks, and Lake shores) Regulations (2000) and EIA regulations (1998) among others. During the interview with one of the district planners for Mbarara district, he had this to say:-

''Whereas there is a wetland policy in place, the lack of related law to enforce the said policy hampers the district's efforts to adequately address the silent issues related to wetland management in addition to funding.....Unless the wetland sub sector comes up with the sector specific law, the challenges being experienced today in wetland management shall continue to exist".

The above findings are supported by Apunyo (2006) who agrees that the existing wetland legislation is fragmented in the different national laws which makes access to these pieces to the general public constrained. This accounts for continued assumed individual ownership of wetlands which contravenes the Constitutional requirement for the state to own and manage wetlands for good of all its citizens.

Furthermore, the research findings indicate the current wetland laws specifically and environmental laws generally are weak and do not provide for strong punishments which is the reason for increased violation of the said laws. Quoting NEA, Cap 153, section 36, and National Environment (Wetlands, riverbanks and Lakeshores Management) Regulations (2000) made there under, a top district leader had this to say;

''The law says that no drainage of wetlands is permissible unless a wetland use permit is obtained from NEMA, subject to EIA. However the penalty provided for contravention of this legal provision is not deterrent enough as it provides for the imprisonment of a term not exceeding 3months or a fine of not more than shs3m. This is just not serious enough and unless such provisions are revised to be stronger, wetlands shall continue to be degraded''.

Matovu (2006), Muhumuza (2000) agree to the above findings that the existing national environmental management laws are incompetent and vague on providing and taking action on environmental degraders. The same sentiments are shared by Apunyo, (2006) who observed that, although the implementation of some of environmental laws in Uganda has made landmarks in the management of wetlands, their effective implementation is faced with a number of limitations and challenges. For instance; whereas the legal requirement for environmental impact assessment and the issue of

environmental restoration orders to wetland encroachers in 2004 guided development projects' activities in the wetlands across the country, the major limitation to optimally enforce this legal requirement is political interference.

5.3. Conclusions.

Based on the research findings presented, we can conclude that the study assessed the institutional and legal factors affecting effective management of wetlands in a decentralized setting in Uganda, using Mbarara district as a case study. Of the three objectives and their hypotheses on which the study was based, the following were supported by evidence from the field and accordingly adopted.

5.3.1 Funding and effective wetland management in decentralized setting

Results from the study indicate that funding has a positive relationship with the effective management of wetland resources in decentralized setting in Uganda and this was confirmed by the first hypothesis. From the findings, it was observed that with abolition of graduated tax that traditionally provided much needed funds to implement district programs, the only source of funding now available for wetland management and environment sector at large is conditional grant from the Central Government which also has strings attached in terms of utilization. This largely affects local decision making and compromises the equitable, effective and sustainable management of wetland resources in the districts. Against this background, an improvement in both Central Government transfers and Local revenue allocation to wetlands management, coupled with donor funding would greatly improve service delivery and ultimately improve the conservation of wetland resources in particular and environment in general for the country upon which the Uganda's economy largely depends.

5.3.2 Human resource and effective wetland management in decentralized setting

Human resource capital as assessed in terms of staffing levels, skills and motivation was also found to have a significant positive relationship with the effective management of wetland resources in a decentralized setting. This was contrary to the study hypothesis of no significant relationship between the two variables of the study i.e. human resource and effective wetland management. From the findings, it was observed that indeed human resource capital in terms of staffing levels, relevant skills and staff motivation are key ingredients of an effective and efficient service delivery. This is more so where wetland resource management is a relatively new phenomenon compared to sectors like agriculture and where the values or functions derived from proper management cannot easily be quantified say in monetary terms. The study therefore concluded that, for the districts local governments to enhance effective, efficient and equitable management of wetland resources in their areas of jurisdiction, it is important that the core elements of human resource performance like adequate personnel, necessary skills and desired motivation are improved.

5.3.3 Legal framework and effective wetland management in decentralized system of governance

The last objective of the study was the existing legal framework and its effect on effective management of wetland resources in a decentralized system of governance and the results indicate that indeed there exists a significant positive relationship between the legal frame work and effective wetland management in a decentralized setting. This implies that with conducive, adequate, strong, specific, current, consistent and coordinated legal framework, coupled with necessary incentives, independent and functional institutions as well as political will to implement them, wetland resources and environment in general would by far be better managed in the country than the prevailing status quo.

5.4 Recommendations

Based on the study subject, objectives, research questions and hypotheses, the researcher collected and analyzed data upon which the study findings and conclusions have been made. The following outlines recommendation of the study;

- There is a need for a paradigm shift among the district leadership both technocrats and politicians alike, to become active players and equal partners of Central Government as opposed to being recipients of pre-dictated funds that are not commensurate to the district needs and priorities. This calls for efficient planning and budgeting mechanism that addresses both short term specific needs with clear linkage to overall Local Government goal and vision. Findings show that more than 70% of the funds for wetland management at the district come from the central government as conditional grant with clear guidelines on its utilization. This does not only hamper local decision making based on local problems but also makes the management of emerging challenges impossible since there are penalties to non compliance. It is therefore prudent that the district leadership takes charge and ensure that the priority needs are respected and addressed by all stakeholders and funding agencies including Central Government.
- District Local Governments should further explore avenues of improving funding for wetland management activities including payment for ecosystem services options to those using wetland resources, taxation of wetland products at local level and enrollment of donor support among other initiatives.

- In regard to human resource development, the central and local governments should devise means of enhancing human resource performance to achieve the desired outputs in sustainable wetland management and environment at large. There should be a deliberate effort to recruit the required personnel to handle day today management of wetland resources both at the district and lower local government levels just like we have agriculture, community development and

health officers; however long term this might take. In the short term however, there is a need to designate and train the existing personnel specifically at sub county levels and adequately facilitate them to handle wetland resources management on routine basis.

- As far as skills development is concerned, the Local governments should develop a comprehensive capacity building program where each staff, irrespective of the sector, is accorded equal opportunities to undergo further trainings in relevant fields. This will not only increase performance, but also motivation and ultimately effective wetland resources management.

- Other incentives like support supervision, increased salaries and allowances and adequate facilitation of the wetland sub sector office are necessary to improve effective, equity, accountability and sustainable management of wetland resources in the country and specifically districts.

- Legally, it was found out that the wetlands sub sector lacks a specific law to operationalize the existing wetland policy; therefore all efforts at national level should be geared towards formulating a wetland law that will go a long way in alleviating the existing problems related to enforcement and compliance.

- District local governments should also be proactive and scale up formulation of district ordinances and lower local council bye-laws that are community driven and hence enforceable.

- As it was found out during the study, there is lack of political commitment towards implementation of not only wetland laws and policies but generally all the country's legal frameworks; and such sensitization campaigns should be stepped up aimed at making the

political elite to appreciate the values and importance of natural resources particularly wetlands and hope to enlist their support during the day to day management of wetland resources.

- There is a need to streamline existing legal frame work on environment and wetland management in the country with other sectoral laws and policies like agriculture, physical planning and land use which have seemed to compromise the sustainable use of wetland resources and are often blamed to be the cause of enforcement failures.

5.5 Contributions of the study

With respect to funding, the study exposed the meager resources allocated to wetlands and environment and natural resource (ENR) sector in general and this necessitates extra funding for improved management of wetland resources since wetlands are valuable for the economic development of the country. That the whole natural resources sector including wetlands management receives an average of shs17M a year to implement environmental management activities in the whole district is shocking to say the least. Accordingly, Mbarara district might even be better with such peanuts, other districts get as less as shs5M per year with no any local revenue allocation to the sector only depending on central government transfers. It is therefore hoped that with such findings, policy decision makers at all levels shall come up with workable solutions to avert this worrying phenomenon considering the fact that wetland biodiversity contribute greatly to climate modulation; the impact of whose change are already being felt in the country.

Further, the challenges of human resource capacity in the wetland sub sector at the district level were exposed. Looking at those loopholes particularly in terms of staffing, motivation and skills, a lot needs to be done to enhance effectiveness in service delivery. Based on the findings, it was found out that the department of natural resources is understaffed, poorly facilitated and where sub county focal point persons on wetland have been designated, they are idle arising out of lack of funds to facilitate their

functioning. This compounds the problem even further as wetland degradation is the order of the day and nobody seems to bother the district over. With such weaknesses exposed, the study recommended that the Local Governments should use the existing staff structures in the district and lower local governments to implement wetland activities at least in the short term and intensify advocacy and lobbying for recruitment of permanent personnel to manage wetland resources. Likewise, as was discovered that the morale and even skills of the existing staff are low, the study recommended a number of measures ranging from training, adequate facilitation, support supervision especially from the central government as well as political support that would go a long way in enhancing performance in wetland management.

Based on the findings of the study, it is hoped that the weaknesses in the existing legal framework governing wetland management in Uganda shall be addressed. The study identified existing gaps in the current legal and policy framework especially as applied to Local Governments which have been incapacitated to initiate the district and local level ordinances and byelaws that would go a long way in bridging those gaps envisaged in national and international laws. The study found out that although a number of laws and policies related to wetland are in place, they are just scattered across other legal art pieces and inconsistent which makes implementation a bit difficult by relevant state departments and agencies. With such recommendations of wetland sector specific law formulation that would operationalize the existing wetland policy, capacity building of local governments to develop byelaws and ordinances relevant to local settings and adequate facilitation of institutions to implement those laws and policies; wetland management in the country shall greatly improve hence contributing to the socio-economic development of the country.

The study based on the findings shall also contribute to the academic knowledge base not only to the researcher in attaining his MMS, but also to other researchers interested in decentralized natural

resource management with specific interest to wetland management. It should be noted that wetland management in Uganda is not a so old field, just 24 years since it was officially recognized by the government. Hence there are quite a number of issues that have not been researched upon and it is hoped that this research shall open up the subject to many scholars and scientists to explore further sustainable wetland management concepts that would ultimately help Uganda and international community at large to understand fully the science of wetlands.

5.6 Areas for further research

The following suffice:

1. Since the study limited itself to three variables of funding, human resource and legal framework and their effect on management of wetland resources in a decentralized system of governance, the researcher believes there are quite a number of other variables that would contribute to enriching the findings of this study. Research could be done in areas of population explosion, urbanization and political climate and their effect on wetland management in the country.
2. Natural resources management in general and wetlands in particular continue to attract the least attention of the policy makers in terms of planning and budgeting and the public appreciation, how can this trend be reversed?
3. Thirdly, according to the literature, human resource of any organization is its most valuable resource. Under what circumstances does the staff, even when they don't seem to be motivated influence effective service delivery in wetland management?
4. Why is it that in Uganda, there is a laxity in enforcement of environmental laws?

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APPENDICES

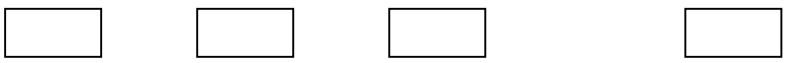
APPENDIX I: THE QUESTIONNAIRE

Dear Respondent,

I am by names of Bernard Arinaitwe Mbasa, a student of Uganda Management Institute (UMI) pursuing a Master of Arts degree in Management studies (Project Planning and Management)**.** I am carrying out an assessment of "*the institutional and legal factors affecting the management of wetland resources in a decentralised system of governance in Uganda: A case study of Mbarara district"***.*** All the data collected will be used for academic purposes only and all the views will be treated with a lot of confidentiality.

SECTION A: (Tick where applicable);

RESPONDENT'S BIO-DATA



1. Age 18-29 30-39 40-49 50 and above

2. Gender: a). Male ☐ b). Female ☐

3. Marital status:

(i) Single ☐

(ii) Married ☐

(iii)Divorced ☐

(iv)Separated ☐

(v) Widowed ☐

(vi) Others, (specify) …….

4. Level of education:

(i) Primary level ☐

(ii) Secondary ☐

(iii) Diploma ☐

(iv) Degree ☐

Others (specify)…….

5. Designation of respondent……

6. Category of respondent

i) Technical sector head

ii) sub county technical staff

iii) Political leader

SECTION B

THE INSTITUTIONAL FACTORS AFFECTING THE MANAGEMENT OF WETLAND RESOURCES IN DECENTRALIZED SYSTEM OF GOVERNANCE

Basing on the Likert Scale of Strongly Agree-1, Agree-2, Neutral-3, Disagree-4 and Strongly Disagree-5, please respond to the following statements by ticking the most appropriate one;

B1: Institutional funding

	Response	**1**	**2**	**3**	**4**	**5**

1	Most wetland programmes in the district/sub county are designed and funded by donors					
2	Donor funds are always directed to particular programmes and projects					
3	Donor funding has been critical in providing logistics for sustainable wetland management					
4	Large percentage of funds for wetland management in district/sub county come from central government as conditional grants					
5	Funds from the central government are directed to particular programmes and projects					
6	The central government wetland budget for district through MWE (PAF) keeps on fluctuating					
7	Resources generated and allocated to manage wetlands in district/sub county affect effective wetland management a great deal					
8	The largest percentage of the district's/sub county wetland budget is covered by locally generated resources					
9	A percentage of locally generated resources allocated to management of wetlands/environment has actually been utilized for the same purpose					
10	Sustainable wetland management has been treated as a priority in the district's/sub county's resource generation and allocation					
11	Decentralization has enabled the districts/sub county to efficiently deploy resources to priority wetland needs					
12	Monitoring, implementation and evaluation of wetland activities and programmes has been strengthened under decentralization					
13	The central government funds transfer for wetlands at the district is prompt					
14	Facilitation of staff in the wetland sub sector at the district/sub county is adequate					

15	Misallocation/diversion of central government PAF wetland funds at the district has impacted on the management of wetlands					
16	Corruption and embezzlement of wetland funds at the district is common					
17	The wetland sub sector at the district/sub county is the least funded					

B2: Institutional Human Resource

	Response	**1**	**2**	**3**	**4**	**5**
1	The department of natural resources at the district has enough staff					
2	The staff employed in the environment department at the district are skilled in the effective management of wetland resources					
3	Local governments departments are generally adequately staffed					
4	The district has a substantive wetland officer to ensure effective wetland management					
5	Human resources in the department of environment management are mindful of the environment					
6	All personnel provided for in the environment sector staff structure at the district are recruited					
7	There is continuous training of district/sub county staff in wetland management by the district					
8	There are designated trained staff at sub county to effectively handle wetland management issues					
9	The existing personnel in wetland sub sector both at district and sub county is adequately facilitated to effectively manage wetlands					
10	There is constant supervision of the sub county designated environment focal person by the environment/wetland officer and information sharing					
11	There is regular reporting by sub county wetland and environment focal persons to the district environment/wetland office					
12	Specialized staff in the district/sub county are paid allowances for their work					
13	Remoteness of the district/sub county makes the attraction of personnel difficult					
14	There is lack of qualified people to replace those retiring or moving on					

16	The district has competent and sufficient human resources to manage technical aspects of wetland programming and management					
16	Technical support from the central government (MWE) is adequate in ensuring effective management of wetland resources					
17	The district/sub county has in place mechanisms to enforce public sector standing orders on staff performance and discipline					

B3: Legal framework

	Response	**1**	**2**	**3**	**4**	**5**
1	There are ample laws, policies and regulations in Uganda to adequately regulate the use of wetland resources in the country					
2	Some of the provisions in environment/wetland laws and regulations in Uganda have outlived their purpose and intent.					
3	All the laws whether on environment or otherwise in Uganda are implemented/enforced					
4	Most of the laws on wetlands specifically are fragmented and scattered across other legal art pieces					
5	The provisions in the existing environmental laws regarding wetlands ownership, use and access are adequate and straight forward					
6	Generally environmental/wetland laws and regulations are strong and provide for heavy punishments					
7	Institutions responsible for the enforcement of environmental/wetland laws and regulations have enough financial and technical capacity to do so					

8	All the existing legal and policy provisions on environment/wetlands are consistent with other sector laws like agriculture act, water act etc					
9	There is persistent compliance to environment and wetland laws in the district/sub county					
10	The communities' appreciation the value and functions of wetlands at the district/sub county level.					
11	The district wetland officer and sub county environment focal officers are adequately empowered to enforce the existing laws					
12	There is a fully constituted Local Environment Committee at sub county/division to supervise environment/wetland activities					
13	All existing Local environment committees at the sub county/division are functional					
14	The enforceability of some of the statutory provisions in environment/wetland laws and regulations is practical					
15	There is a clear demarcation between the roles, responsibilities and powers of Local government, central government and other agencies like NEMA					
16	The district/sub county has byelaws and ordinances to guide effective wetland management and conservation					
17	There is some political will in the district/sub county to enforce the existing laws and regulations on wetlands					
18	Corruption of law enforcement officers affects the genuine enforcement of wetland laws in the district/division					
19	The existing legal framework on wetlands/environment provides incentives for active community participation in observation and enforcement of laws and regulations					

B4: Wetland management (DV)

	Response	**1**	**2**	**3**	**4**	**5**

1	The district has managed wetland resources effectively and efficiently					
2	Wetland management planning activities at the sub county/division and district levels involves all relevant stakeholders					
3	Budgeting for wetland management activities at sub county/division and district is done with input from local wetland resource users					
4	Fiscal accountability of wetland funds both at the sub county and district is done regularly.					
5	Politicians in the district and sub county have been helpful in conserving the wetlands and are accountable to the people they serve					
6	There are serious penalties for employees who fail to make accountability for wetland funds disbursed to them					
7	The district planning process is guided by the central government guidelines that specify priority activities and how plans must look like.					
8	There are conditions attached to the funds disbursed to the district from the central government regarding sustainable wetland management					
9	The Public can exercise some forms of accountability to check the exercise of decentralized powers held by those to whom these powers have been bestowed					
10	Funds allocated to the wetland department at district are equitably distributed to all the sub counties					

APPENDIX II

FGD GUIDE FOR LC1 COMMITTEES

Background information

Sub county----------

Parish-…….

Village……..

No. Male……

No. of female……

Institutional funding and management of wetlands

1. Who participates in development of procedures and processes of generating funds for effective wetland management in the village/sub county?

2. In your view how much of the resources generated at sub county level is utilized for wetland activities in your village

3. What proportion of the sub county/village budget is allocated to the effective management of wetland resources?

4.Who determines wetland resource allocation and deployment at village/sub county level

5. In your view, is wetlands management treated as a priority in the districts/sub county resource generation and allocation?

6. In your opinion, how does LEC contribute to prioritization of wetland needs and subsequent decisions on resource allocation at sub county/division level?

7. What has been the level of corruption in the district/sub county? Do you think corruption has in any way affected the way wetlands are managed in the district/sub county?

8. In your view, would you say that the wetland's budget is sufficient or not. Explain.

9.What are some of the wetland related donor funded programmes you are aware of in your sub county?

10. Has donor funding affected the way wetlands are managed in the sub county/division? Explain.

Human resources and management of wetlands

1. Do you have a designated environment/wetland officer at the sub county?

2. How often does he/she conduct sensitization meetings in the village/parish? What have you learnt from such meetings?

3. What is the relationship between the LC1 council and LEC at sub county with regard to information sharing and reporting of environmental abuses?

4. Do you have secretary for environment at LC1 that is active in overseeing environment/wetland activities in the village? What does he/she do?

5. Does the sub county encourage the participation of communities in the effective management of wetland resources?

7. In your view what are limitations to implementation of prioritized wetland activities to address needs in your sub county/area?

8.In your own opinion what do you think should be done to increase the level of community participation in the effective management of wetlands in the district.

9. In your view how has the creation of LECs improved management of wetland at sub county and village levels?

10. In your view how are sub counties able to articulate and advocate for appropriate response of wetlands needs in your area?

11. To what extent has the decentralized response enabled sub counties to monitor and evaluate wetland programmes?

12. How has the involvement of LECs been in ensuring efficient deployment of resources prioritized if any?

13. How has decentralization enabled LECs to meaningfully contribute to optimal wetland service delivery in district?

Legal framework and management of wetland resources

1. Briefly tell us some of the laws in place for the protection/conservation of the environment/wetlands?

2. Do all the laws available for the protection of the environment being implemented? Explain your answer

3. Who enforces environmental laws in the district/sub county?

4. Do you have case studies where wetland laws have been enforced in your village/sub county? Explain why and challenges encountered by law enforcers

5. Why is it that in spite of the many laws in place, the environment and in particular wetlands continue to be degraded?

6. Are you aware of any laws that conflict with those concerned with the protection and conservation of environment? List them

7. If you were an environment/wetland officer, what would you love to see done differently/changed?

8. Suggest some recommendations for the future of our environment and wetlands in particular

Wetland management

1. Do community members take part in the planning process at the local level for effective wetland management? If yes explain how

2. Does the budgeting process for wetland management activities at the lower local government level involve all relevant stakeholders? If yes, elaborate

3. In your view, has decentralization enabled local leaders to be held accountable for their actions regarding wetland management?

4. How regularly do the elected and technical leaders provide platform for exchanging ideas regarding wetland management in your area.

5. What mechanisms of accountability can easily be legislated and implemented in your area? (e.g recall, referenda, legal recourse, public reporting requirements, etc)

6. It's argued that wetland resources in the district have been effectively managed. What is your view on this?

7. To what extent would you say that resources for wetland management in the district are efficiently and equitably utilized? Explain your answer.

8. How do the wetland management activities such as enforcement... in your area affect gender dimensions? Elaborate

9. Do you think that it was right to decentralise wetland management activities? If yes what role have you played as resource users? If no give reasons

APPENDIX III

Interview guide for the key informants at the district (DEC & DTPC)

Funding

1. What percentage of the district budget is allocated to the effective management of wetland resources?

2. In your view, do you think the budget allocated is sufficient enough in as far as the effective management of wetlands is concerned?

3. Which is the district major source of funding for wetland activities? (Probe for whether it's:- a) internal, b) Government or c) donor funding or any other).

4. If b above, what are the challenges experienced in the district regarding central government transfers.

5. What are the laid down procedures for resource prioritization and deployment in the district

6. What are some of the donor funded wetland programmes you are aware of in the district

7. How were those programmes/activities developed?

8 In your view how much of these programmes have responded to the district prioritized needs?

9. What are some of the processes undertaken in the development of these programmes?

10 Who participates in the design and implementation of these programmes?

11. What categories of donations and grants have been mostly received in the district? E.g financial, technical, material etc

12. In your view what percentage of your district wetland budget is covered by donor funds

13. In your view how has donor funding affected the district planning procedures (performance).Please explain

14. In your view what do you think have been the advantages of decentralizing management of wetlands in Mbarara district?

15. In your view how has the district been able to articulate and influence relevant authorities in responding to identified wetland management needs

16. What measures are employed to generate resources for the management of wetlands?

HRM

1. What are the staffing levels in the natural resources department at the district level?

2. In your view what have the district leaders done to improve the human resources capacity in the district?

3.What step has sector/committee taken to bridge the gap between required staff and currently available staff?

4. In your view, what have been the main constraints to realization of recommended human capacity if any?

5. In your view do you think there are sufficient wetland structures at lower local government levels?

6. Who participates in the selection/appointment of wetland service structures at that level?

7. Who determine the requirements for the wetland management activities at the district level?

8. Has decentralization of wetland/environmental management improved quality of staff and services offered?

9. Who participates in monitoring, implementation and evaluation of wetland programmes in district?

10. In yr opinion how can the district strengthen capacity to deliver optimal wetland management services?

11. What controversies exist between political leaders and technical staff?

12. Who makes the plans and processes for revenue generation at the district?

Laws

1. Briefly tell us some of the laws in place for the protection/conservation of the environment/wetlands?

2. Do all the laws available for the protection of the environment being implemented? Explain your answer

3. Who enforces environmental laws in the district/sub county?

4. Do you have case studies where wetland laws have been enforced in your village/sub county? Explain why and challenges encountered by law enforcers

5. Why is it that in spite of the many laws in place, the environment and in particular wetlands continue to be degraded?

6. Are you aware of any laws that conflict with those concerned with the protection and conservation of environment? List them

7. If you were an environment/wetland officer, what would you love to see done differently/changed?

8. Suggest some recommendations for the future of our environment and wetlands in particular

WETLAND MANAGEMENT

1. In your view, do you think wetland resources in the district have been managed effectively? Explain

2. Do the DEC and DTPC participate in the planning and budgeting processes for the wetland activities in the district? If yes what is your role?

3. In your view, how has the decentralization enabled local leaders (both elected and appointed) to be held accountable for their actions regarding wetland management?

4. How regularly do the elected and technical leaders provide platform for exchanging ideas regarding wetland management in your district?

5. What mechanisms have been put in place to ensure that wetland management activities in your district are strengthened?

6. Why and how should local government play a greater role in effective wetland resource use and management?

7. What mechanisms of accountability can easily be legislated and implemented in your district? (e.g recall, referenda, legal recourse, public reporting requirements, etc)

8. To what extent have the resources for wetland management in your district been efficiently and equitably utilized? Explain

9. How do the wetland management activities such as enforcement in your district affect gender dimensions? Elaborate

10. Do you think that it was right to decentralise wetland management activities? If yes what role have you played as a district leader? If no give reasons

11. Any other comment?

END