



UGANDA MANAGEMENT INSTITUTE

**AN ASSESSMENT OF THE CHALLENGES FACING WETLAND MANAGEMENT
POLICY IMPLEMENTATION IN NAMUTUMBA DISTRICT: A CASE STUDY OF
WETLANDS IN NAMUTUMBA TOWN COUNCIL IN UGANDA**

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fulfillment of the requirements for the award of the Masters Degree in
Management Studies (Urban Governance and Management) of Uganda
Management Institute**

FEBRUARY, 2011

DECLARATION

I, Kasajja Jamirlu Kaiiru, hereby declare that this report is my original work. To the best of my knowledge, the work has never been submitted for any higher degree award from Uganda Management Institute or any other institution of higher learning. Furthermore hereby declare that, the conception, research, organization and writing of the report were entirely my own effort. The study was conducted under the supervision of Dr Muhenda Mary B. and Dr Menya David. All previous works quoted were distinguished and identified by reference.

SIGNEDDATE.....

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APPROVAL

We certify that Kasajja Jamirlu Kaiiru wrote this Dissertation under our supervision. The Dissertation has been submitted for examination with our approval as Supervisors.

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DEDICATION

To all my children and wife who missed my love and attention during this course, friends and my entire family; and most especially my Daddy who tirelessly struggled to educate me, my mother who used to walk 10 km's to bring me food at university, I love you mother.

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LIST OF ABBREVIATIONS

CAO	Chief Administrative Officer
CAP	Chapter
CANARI	Carriabbean National Research Institute
DFID	Department For International Development
EAP	Environmental Action Plan
EC	European Community
GEF	Global Environmental Faculty
FAO	Food and Agricultural Organization
IUCN	The world Conservation Union
IWMI	International Water Management Institute
MoWL&E	Ministry Of Water, Lands and Environment
MoWE	Ministry Of Water and Environment
NEMA	National Environmental Management Authority
NEPAD	New partnership for Africa's Development
NGOs	Non-Governmental Organization
SPSS	Statistical Package For Social Science
UBOS	Uganda Bureau of Statistics
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNICEF	United Nations Children's Fund
ULRC	Uganda Law Reform Commission
WSSD	Water Shed for Sustainable Development

ABSTRACT

INTRODUCTION

This study was an investigation of challenges facing wetland management policy implementation in Namutumba Town Council, Namutumba District. The study was a cross sectional survey in nature which utilized a sample size of 113 respondents. Sixty nine (69) respondents were subjected to a self administered questionnaire while forty four (44) respondents were interviewed. The collected data was analyzed using descriptive statistics, Correlation Coefficient and multiple regression methods. Qualitative data was analyzed through typing up of field notes, sorting and coding of the responses and grouping under similar themes. The results indicated that the two variables namely; Community policy adoption and technical personnel support had a positive significant effect on wetland conservation and sustainability. Surprisingly donor funding and local revenue mobilization did not have significant relationship with wetland management policy implementation. This study recommends that Government should compensate the communities who have been utilizing the wetlands and evict them; mobilize community members to participate in the implementation of activities and impart monitoring and evaluation skills to all policy implementers. There is also need to address the inconsistencies in the Wetland Management Regulations. Further research could investigate factors that impact on local government wetland management strategies.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study was an investigation of challenges facing wetland management policy implementation in Namutumba Town Council, Namutumba District. This chapter covers, the back ground to the study, statement of the problem, purpose of the study, objectives of the study, research questions, hypothesis, scope of the study, justification, operational definition of terms and concepts. In this study challenges were taken for independent variables and wetland management policy implementation as the dependent variable.

1.1 Background to the Study

Environmental management policies have turned out to be an international concern. Governments all over the world and specifically in Africa have increasingly given attention to policy for both green and brown environmental issues which include air, water, pollution and solid waste management and acknowledge their impact on green environment. Previously, environmental management in Africa focused on the preservation of world life and natural resources. In many countries, particularly eastern and Southern Africa, this policy was focused mainly on tourism (Mugenyi, 2007).

Environmental management and policy, evolved considerably around mid 1880's from world life conversation focus, to more integrated kind of management, taking into account, socio and economic issues. Several policy intervention since 1992 earth summit, from Agenda 21 through the summit on sustainable development (WSSD) Johannesburg plan of implementation to new partnership for Africa's development (NEPAD'S), environmental

action plan (NEPAD – EAP) gives credence to the need for an interrelated approach to environmental problems and development of related policies increasingly following suit (Peter, 2000).

Nations are embracing the industrial definition of economic development and seek to emulate the industrialized success in obliterating wetlands through reclamation. As the exercise of reclamation goes on around the world, there is need to examine its rationale closely since it involves conversion of wetlands to dry lands for purposes of gaining highly economic value specifically in farming and urban development. Benefits out of reclamation are tangible, visible and usually quickly realized. However, cost benefit analysis indicates that the service, values, and benefits from wetlands are far greater than tangible benefits due to reclaimed wetlands. The values of wetlands have a far social economic rich effect and great ecological impact (Alison, 2004).

Macdonald (1997), stressed that the world is slowly coming to realize what priceless national assets of wetlands are a vital link between water and land, very essential to the healthy functioning of our catchments and aquatic systems that support enormous bio diversity contribute to water quality and provide multitude of benefits to society. It is estimated that less than 50% of the wetlands which existed at the time of European settlement still remain and sighted that, if wetland degradation continue water quality will decline, species will disappear forever, the economy will suffer and the way of life will decline.

The key to the better understanding of wetland problems and their mitigation through more sustainable management lies in the recognition of the importance of the diversity of functions

and values supplied to the society at different geographical and time scales. Understanding the interaction between aquatic ecosystem, economy and society cannot be achieved by observation studies alone, modeling of the key environmental process is a vital tool that must be used if wetland management is to achieve its overall sustainability goal and objectives. For purposes of investing and modeling a particular local wetland system one is required to consider measures of the forces of social economic changes such as population growth, urbanization and on the influxes of toxic, nutrients and sediments (pressure) and assessment of the human welfare impacts of these influx changes such as assessment of the social economic costs and benefits involved will provide essential management information, possible resources and value trade offs (Brouwer, 2003). It is upon this kind of background that several organization such as Ramsar International Organization, the World Conservation Union, Wetland International New Partnership for Africa's Development, National Environment Management Authority for Uganda have been established purposely to coordinate, regulate and control utilization of natural resources. Their activities among others entail formulation and implementation of environment management policies.

The parliament of Uganda under chapter 15 Article 245 provides a legal instrument for the establishment of National Environment Management Authority (NEMA) a Lead Agency in Uganda responsible to coordinate, monitor, enforce, supervise all activities in the field of environment and for purposes of sustainable development, Uganda enacted the national policy for the Conservation and Management of Wetland Resources Policy 1995, the National Environment Management Policy for Uganda 1994 chapter 3 section 36 wetlands conservation and management.

In addition, several laws and regulations have been put in place to reduce on escalation of wetland degradation and these include; The local government Act Cap 243 as amended and the National Environment Act Cap 153 National Environment (wetlands, river banks and lake shore management) regulations 2000, Wetlands and the Law (October, 2000). These laws and regulations were formulated to help and guide Local Governments, Non Governmental Organizations and other Stakeholders in the implementation of wetland management policy in collaboration with National Environmental Management Authority (NEMA).

Uganda under the decentralization program initiated in 1993 and the Local Government system which came in existence in 1997 saw the transfer of power to the Local Government, which automatically meant that Local Government were now charged with a responsibility of making appropriate decisions affecting their communities in line with the Central Government priorities and implementation of law, policies and regulations accordingly. However, the trend of global urbanization in the world over and in Uganda specifically partly explains why great pressure is being exerted on wetlands. The increase in urban population from 1.6m to 3.6m (11.3% to 12.3%) between 1991 and 2002 has not matched with infrastructure development (UBOS, 2008). The increasing population and its attendant demands energy and agricultural expansion on natural resources have led to their marked destruction for example, the demand for fuel-wood has led to depletion of wetlands marginal land and forests (UBOS, 2008).

Wetlands have more potential to contribute significantly to pro-poor economic growth as the majority of the rural population in Uganda depends on wetlands. They provide both direct

and indirect values. Direct values include production and consumption of goods and services such as fish, fuel-wood, building pole, sand, gravel, clay mines, wild food and medicines, paddy rice and yams growing, livestock grazing, transport and recreation. While indirect values include ecosystem functions and services such as water quality, water flow, water storage and purification, water recharge and flood control and storm protection, (MoWE, 2001).

This research mainly focused on wetlands in form of swamps in Namutumba Town Council, Namutumba District, Eastern Uganda which fall under the category of Non-gazatted wetlands. The study particularly focused on finding how funding, stakeholder participation and monitoring and evaluation relate to wetland management policy implementation in Namutumba Town Council.

1.2 Statement of the Problem

The aspect of conservation and sustainability for wetlands in Namutumba Town Council is of little success given the fact that there is still massive grazing and use of poor cultivation methods for growing of paddy rice, cutting of trees for firewood and clearing grass for cultivation within the wetlands is still rampant. All these activities result into wetland degradation and of which if not addressed would lead to loss of soil nutrients, increase in levels of soil salinity, (Rwabuhoro's Report, 2009). This implies that wetlands can no longer maintain their capacity to control floods and retain soil fertility. The levels of water purification through filterization are reduced and more so wetlands are often exposed to evaporation (Nema, 2005). Hence the objective of the wetland management policy to protect and conserve wetlands in order to sustain their values for the present and future wellbeing of

the people and ensuring that only non destructive uses are carried out in and around wetlands is not effective as anticipated (Kajura, 1995).

Wetlands perform both natural (ecological) and socio-economic functions which include, maintenance of water table, Prevention of erosion, Reduction in extreme water flow, Sediment trap, Wildlife habitats and centers of biological diversity while socio-economic functions include: Tourism, Plant product such as papyrus and palm, Fishing, Cattle grazing Water supply, Nutrient and toxin retention(NEMA Report pg128, 2002).

Despite all these values, a lot of pressure has been mounted on wetlands in both rural and urban areas particularly Kampala, this has degraded wetlands. Wetland were the last free or cheap area for infrastructure development, yet most of these wetland areas were designated as green corridors in Kampala structural plan of 1994. Many of the wetland parts have been converted to industrial use while others have been gradually taken over by semi-slum residential housing and associated use such as cultivation, waste water discharge and Jua kali commerce. In Eastern Uganda, sufficient areas of wetlands have been degraded, some completely reclaimed thus undermining the functions of and access to wetland resources and this is especially true for wetlands outside protected areas, for example degradation is high in eastern Uganda followed by western, central and northern (UNDP Report pg43, 2005).

The study therefore aimed at investigating challenges underlying the failure of wetland management policy implementation in achieving the intended objectives of conserving and sustaining wetlands by protecting them against abuse or encroachment.

1.3 General Objective

The study assessed the magnitude and ranked the challenges facing wetland management policy implementation in Namutumba town council.

1.3.1 Specific Objectives

- (i) To assess the relationship between funding and wetland management policy implementation in Namutumba Town Council.
- (ii) To assess the relationship between stakeholders participation and wetland management policy implementations in Namutumba Town Council.
- (iii) To assess the relationship between monitoring and evaluation and wetland management policy implementation in Namutumba Town Council.
- (iv) To compare and rank the relationship between funding, stakeholder participation, monitoring and evaluation, and Wetland management policy implementation.

1.4 Research Questions

- i) What is the relationship between funding and wetland management policy implementation in Namutumba Town Council?
- ii) What is the relationship between stakeholders' participation and wetland management policy implementation in Namutumba Town Council?
- iii) What is the relationship between monitoring and evaluation and wetland management policy implementation in Namutumba Town Council?
- iv) Which of the independent variables has a strong relationship with wetland management policy implementation in Namutumba Town Council?

1.5 Research Hypotheses

- i) Funding is significantly related to wetland management policy implementation in Namutumba town council.
- ii) Stakeholders' participation is significantly related to wetland management policy implementation in Namutumba town council.
- iii) Monitoring and evaluation is significantly related to wetland management policy implementation in Namutumba town council.

1.6 Scope of the Study

1.6.1 Geographical Scope

The study was conducted in Eastern Uganda, Namutumba District specifically in Namutumba town council. It covered wetlands located in three wards. Namutumba town council is among the newly created town councils (2006/2007) and it's along Iganga, Tirinyi high way to Mbale.

The research involved all stake holders ranging local environment committees, local area land committees, environmental focal person at town council and schools, farmers involved in wetland, opinion leaders such as secretary i.e. for production and environment, District officials in Natural Resources Department wetland inspection Division and National Environment Management Authority (NEMA).

1.6.2 Time Scope

Research involved reviewing of information published by various scholars for the past ten years (1990-2009) and the study lasted for one year, from March 2009-March 2010.

1.6.3 Content Scope

The study involved reviewing of literature, concentrating on aspects which affect the implementation of wetland management policy such as funding, monitoring and evaluation and stakeholder participation field survey.

1.7.0 Justification of the Study

A lot of research has been done in environmental management in urban setting mainly on liquid and solid waste management, however little research has been done regarding protection of wetlands in urban areas. For example research was conducted on “effectiveness of the legal and institutional mechanism for sustainable management of the environment under a decentralized system in Uganda by Mugenyi K M (December 2001) especially in solid management. Other related research in wetland management by wetland inspection division (MoWE) especially on wetlands surrounding Kampala and other big gazetted wetland in Eastern Uganda, Northern, South and Central Uganda.

However, no research has been conducted on small wetlands surrounding Namutumba town council which fall under the category of non gazetted and yet they provide significant economic growth in form of social economic values to the community, production and consumption of goods and services such as fish, fuel-woods, building poles, sand, clay mines, wild food and medicines. In addition they perform an important function for preserving the ecosystem for example water quality, water flow, water storage and purification, water recharge and flood control. It is upon this kind of roles that wetlands contribute to the community which justifies the need for conducting or carrying out this research.

1.8 Significance of the Study

- 1.8.1 The study on challenges facing wetland management policy implementation in Namutumba town council may act as a basis for planning on how to conserve and sustain wetlands.
- 1.8.2 It may provide a basis upon which Namutumba town council authority will identify the existing weakness and strength to design or formulate bye- laws in relation to wetland conservation and management.
- 1.8.3 The study may enhance Namutumba town council capacity in wetland management policy implementation and conservation process.

1.9 Operational definition of terms and concepts

For the purpose of this study the following terms mean:

- Bye laws - Laws made by the lower local governments. LGA
CAP.243(2000)
- Community - Local people surrounding wetlands and those who use the wetlands.
- Environment - Human beings and all things that surround them or refers to the living (biodiversity) and non living components of the natural world. ULRC CAP 153(2000)
- Environment committee - Sector committee in local Governments comprising of politicians and Technical persons ULRC CAP 153(2000)
- Environmental Officer- The officer or person responsible for environmental conservation in the district. ULRC CAP 153(2000)

- Local Environment Committee - Committee established under the Act to oversee the conservation and protection of wetlands. ULRC CAP 153(2000)
- National Environment Management Authority- National agency responsible for the overall management of the environment. NEMA (2000)
- National Environment Statute 1995 - The law in Uganda that provides for integrated environment management. ULRC CAP 153(2000)
- National Wetlands - Wetlands that do not exist as the result of man's activity. NEMA (2000)
- Secretary for Environment - Local or technical person charged with the response. ULRC CAP 153 (2000).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter covers of the theoretical review, conceptual framework, funding and wetland management policy implementation, stakeholders' participation and wetland management policy implementation, monitoring and evaluation for wetland management policy implementation. The information was got from the following sources; Journals, Text books, for classical information, internet and news papers.

2.1 Theoretical Review

The study was guided by the interpretive and bottom-up model, Rational-technical and Top-down model. Interpretive and bottom-up model summarizes theoretical orientations conceiving Implementation as a process of interpretations, figuring out what to do and delivering concrete services to the policy or programme recipients on diverse localities and situation by street bureaucrats with in different organizational settings. Implementation under management and organization is one that, works from the grass root, it involves a large number of people working together of systems to give rise to grander systems thus making the original systems subsystem of the emergent system (Wikedia). Lipskys (1980) street – level bureaucracy model argues that public policy is not best understood as made in legislature or top – floor suites of high ranking administrators because it is made in crowded office. He underlines that in implementing policy at street level, frontline workers are confronted with conflict and ambiguities which include inadequate resources, unsatisfactory working conditions, dangerous and hostile working environments. Unpredictable,

uncooperative and skeptical clients, unclear and ambiguous job specifications and guidelines. These factors force bureaucrats to derive coping strategies or even survival strategies to deal with the unaccommodating working situation which may lead to substantive deviations from or complete attention of official policy specifications (Plank, 2009).

The rational technical theory and top – down approach, indicates a theoretical orientations, taking implementation as a separate state of the policy cycle which is characterized as an enforcement and execution of the states policy decision. This approach further defines policy implementation as a technical control of the execution of decisions from the top down. Sabatier and Mazmarian (1995) define that implementation is the carrying out of a basic policy decision which runs through a number of stages beginning with passage status followed by the policy output of the implementing agencies, the compliance of the target groups with those decisions, actual impact both intended and un intended, the perceived impacts of the agency decisions and important revisions or attempted revision in the basic status.

Accordingly implementation is perceived as technical problems of control over the internality and externality of the policy and these include: Tractability of the problem characterized by availability of valid technical theory and technology, diversity of target group behavior, target group as a percentage of the population and the extent of behavior change required secondly ability of status to structure implementation with, clear and consistent objectives, financial resources, incorporation of adequate causal theory, Hierarchical integration with and among implementing agencies, Recruitment of implementing officials and formal access by out sides. Thirdly, consideration of non-statutory variables affecting implementation such as

socio-economic conditions and technology, media attention to the problem, public support Attitudes and resource consistence, commitment and leadership skill of the implementing officials. In summary the theory outlines six sufficient and general necessary conditions for effective policy implementation and these include clear and consistent policy and implementing objectives, Adequate causal theory or political support implementing process legally structured to enhance compliance by implementing officials and target groups, committed and skillful implementing officials, support of interest group and sovereigns, changes in socio-economic conditions which do not substantially undermine political support or causal theory.(Plank, 2009).

The above theories were supported by Khosa (2003:49) who also noted, on a project entitled closing the gap between policy and implementation in South Africa that the discrepancies between policy and implementation are largely caused by unrealistic policies, and a lack of managerial expertise. Another key finding is that policy implementation has suffered from the absence of people driven process. Insufficient coordination of policy implementation is cited in virtually in all sectors, and has significantly hampered the implementation of policies. In addition, insufficient staffing and capacity of all three spheres of government, as well as the linkages between them, have largely worked against the successful implementation of policies. (Petrus, 2005).

Brouwer (2003) fronted that there is wide spread acceptance of the fact that wetland resources are of vital importance to human well being now and in the future. However, the lack of awareness and incomplete information about the value of wetland resources in policy and decision making processes have resulted in a failure to conserve and protect wetlands

causing unrecognized social and economic loss. The situation has been caused by public open access to wetland resources, user externalities as a result of excessive and unrestricted use of wetland products and services, and lastly, policy intervention failures due to a lack of consistency among policies being enacted across different sectors of the economy.

2.2 Conceptual Review

Jenkins (1978) states that policy is a set of interrelated decisions taken by a political actor concerning the selection of goals and means of achieving them, which is held within the powers of the actors to achieve. It should be partly or wholly developed within the framework of Governmental procedures, influences and organizations. Models can be used as a simplification of reality to describe what is, or attempt to restructure and improve upon reality as a normative prescription of what ought to be as in the case of the rational model.

Matland, (1995) explains that as Implementation research evolved, two schools of thought developed as to the most effective method for studying and describing implementation: Top-down and bottom-up. Top-down supporters see policy designers as the central Actors and concentrate their attention on factors that can be manipulated at national level while bottom-up supporters emphasize target groups and service deliverers. The most common meaning of implementation is to carry out, to accomplish, to fulfill, to produce or to complete a task. For the purposes of a working definition for this research, Policy Implementation is defined as the accomplishment of the policy objectives through the planning and programming of operations and projects so that, the agreed upon outcomes and desired impacts are achieved (Bryand, 2005).

Wetlands areas permanently or seasonally flooded by water where plants and animals have become adapted; and includes swamps, dambos, areas of marsh, peatland, mountain bogs, banks of rivers, vegetation, areas of impended drainage, or blackish salt(ULRC CAP 153 ,2000). The management of wetlands and their use for water quality purposes has resulted in the introduction of a number of terms such as Natural wetlands that do not exist as a result of man's activities. Wetland enhancement which refer to the modification of a natural or created wetland to enhance one or more functions. Wetland creation which means bringing a wetland into existence whether by accident or intentional, Where non existed before. Wetland restoration which is the reestablishment of disturbed or altered wetland as one with greater functions or acreage. This may involve reestablishing original vegetation, hydrology, or reestablish original or closer to original wetland functions (U.S,EPA,1992). Wetland degradation refers to the draining reclamation of wetland areas for agriculture, property, infrastructure development, sand and clay mining, waste dumping, deforestation and fires (UNDP report, 2005).

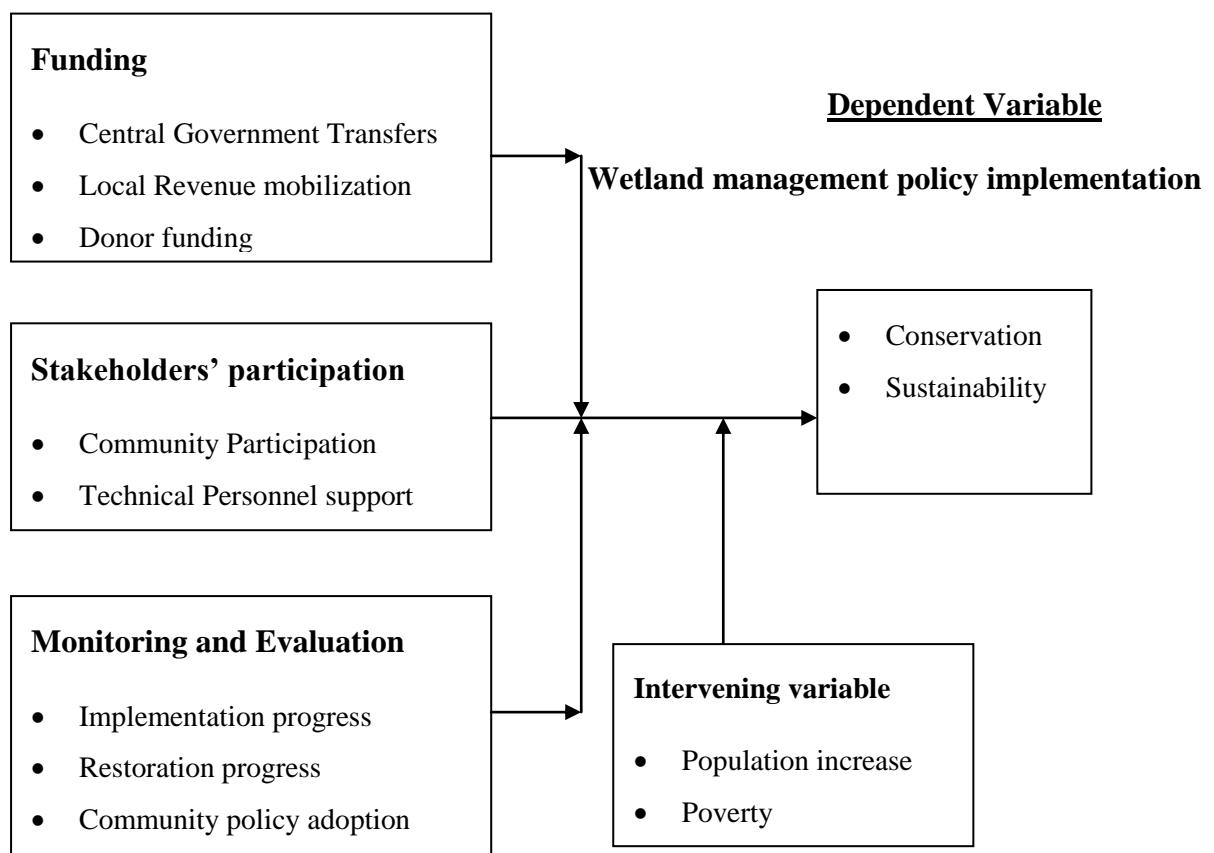
The conceptual framework was adopted and modified from Adeke's dissertation Report entitled "Budget Reforms and Quality Service Delivered in local governments of Uganda(2007)".

2.3 Conceptual Framework

Arising from the conceptual foundation below is a diagram representing the conceptual framework which shows the relationship between the dependent and independent variables.

Fig.1: Showing the conceptual framework

Independent Variables (Challenges)



Adapted and modified from Adeke (2007)

The framework explains the linkage between challenges as independent variables with dimensions of funding, stakeholders' participation and monitoring affecting wetland management policy implementation a dependent variable for conservation and sustainability of wetlands. The contribution of funding in wetland management policy implementation

influence the level of sustainable conservation of wetlands. Funds especially tied on wetland management policy will provide room for awareness creation, restoration, compensation, conservation and sustainability. Local revenue mobilization affects policy implementation in two ways; either Local Governments allocating reasonable funds on their budget for wetland policy implementation or generating local revenue from wetlands in form of hiring or tourism trade.

Equally, the presence of donor funding determines the implementation of wetland management policy. Donor community may decide to finance conservation programmes through restoration of degraded wetlands, sensitization programmes, research and facilitation of monitoring and evaluation of wetland management.

Stakeholders' participation in the implementation of the wetland management policy entails the involvement of the various categories of people within and outside wetland areas. Their contribution is realized through harmonizing their needs and compromising their conflicts towards policy implementation. Technical personnel support is required for the provision of the necessary techniques and guidance during policy implementation stage.

Monitoring is a systematic and continuous assessment of a policy or program progress over time. It provides the means for constant modification and improving the programme and provides a basis for evaluation and review. In addition it's a universal management tool for identifying weakness and strength (Toolkits, 1995). In the course of monitoring and evaluating policy implementation progress of wetlands, there is room to determine whether the objectives of conservation and sustainable use are being met.

2.3.1 Funding and Wetland Management Policy Implementation

Funding of a policy is one of the most important component which leads to policy implementation success, lack of financial resources in facilitating and contributing to participatory processes in the wetland policy implementation leads to a policy failure (CANARI, 2006).

The top-down approach applied, involves economic incentive towards local governments. The amount of compensation to local farmers is a key assurance to successive implementation of wetland conservation.(Jua & Huo, 1998),Striking a balance is a demonstration project of wetlands and poverty reduction: it's carried out under the umbrella of wetlands international and financed by Dutch ministry of foreign Affairs (Wetland Action 2008).

In the approved structure plan(1994) of city council of Kampala Nakivubo wetland was gazetted as a green Zone or belt, to the contrary KCC is generating local revenue out of the infrastructures and activities such as Jua kali established in the wetlands instead of implementing the structural plan, (MoWL&E , 2001). This kind of revenue generation impends the implementation of Wetland policies. Mafabi, (2005), appreciates that funding has facilitated this department through research, surveying of valuable wetlands in Uganda and making of the available reports of wetlands. However, he argues that for wetland management policy implementation to succeed there is need to fund lower communities or community based initiatives, hence the justification for this study.

In South Africa, International Wetland Management Institute (IWMI) focus on wetlands and agriculture, the increasing concern of wetlands has made government and conservation-focused agencies aware of the need to move away from conservation approach and look more on a holistic sustainable management of wetlands. International wetland management institute is working on two projects under the title of wetland based livelihood in the Limpopo Basin. Balancing social welfare and Environment of inland wetlands in South Africa. A livelihoods Ecosystem approach supported by the Global Environment facility, FAO IUCN, NGOs and Universities in the region (Annual Report 2005/06 IUMI). In Namutmba however, National Agriculture Advisory services(NAADs) focus mainly on improving agriculture output and house hold income but not wetland conservation and hence the need for further research.

2.3.2 Stakeholders' participation and wetland management policy implementation

The success of any policy depends on the extent of local people involvement. Rural households are dependent on wetlands as a source of their livelihood and income therefore they understand their environment and socio-economic benefits accruing out of wetlands. Community involvement helps policy designers and implementers to assess varied impacts of the policy on different groups in society (Patrick & Lee, 1997).

CANARI (2006), responsibility for wetland management is often divided between several agencies with weak or no cross-sectional links developed specifically to address wetland management issues yet, management on sectoral basis hinders integrated planning and policy implementation since each sector does not understand clearly its roles and responsibilities.

Striking a balanced project indicates that local institutions under a sense of agreed rules for resource management and organizations are essential for sustainable management of wetlands. Local community based institutions are needed to coordinate wetland use practices and they should be participatory. Working with the community helps wetland management institution to identify the real and practical issues affecting the implementation of wetland policy (Wetland Action 2008), which is not the same in Namutumba District despite the fact that Local Environment Committees are in place. Gonderson(1995), urge that, in the case of United States increased public participation in policy making promotes more sophisticated and effective wetland decision making which is evidenced by benefits of state-local co-management schemes(Walker 1999).

Local Governments are linked to central government through the establishment of regional technical support units. Regional technical support units have coordinators who are responsible for advising Districts on relevant matters concerning the implementation of wetland management policy and they are supported financially and technically by the wetland inspection Division of the Ministry of Water and Environment while at the District level under the devolution programme, the Natural Resource Department is responsible for wetland management and district environment officer is fully charged with this responsibility (Mafabi, 2005).

The increased emphasis on participation of local communities in resource management and decision making provides important opportunities for improving both the effectiveness and equity of conservation programs. Sustainable development can only be achieved with the participation and support of rural communities. However, policies which deny local people

participation or access and control over wetland resources traditionally face strong resistance. Although democratization is a key to community based environmental management its prudent that in the short run can present a threat to the environment if top-down conservation enforcement is curtailed without adequate local institution in place to fill the gaps, and where increased political sensitivity to local needs intensifies pressure to exploit resources for immediate economic benefits (Walker,1999).

Local Wetland Management Committees and environmental focal persons at lower Local Government determine the level of wetland policy implementation and conservation (Nema, 2000). More so reports presented to members of parliament by NEMA indicate that district local councils were involved in the selling of Kinawataka wetland Wakiso district, Nakivubo and Lubigi Kampala wetlands hence failing the policy (Kafuuma & Bekunda, 2009).

2.3.3 Monitoring and evaluation for wetland management policy implementation

Monitoring is a continuous or periodic process of collecting and analyzing data to measure the performance of a program, project or activity, as an integral and continuing part of a program management; it provides managers and stakeholders with regular feedback on implementation and progress towards the attainment of wetland management policy implementation objectives (Van den Berg, 2002). Monitoring and evaluation help to detect changes and enable policy implementers to adjust in their designs according to the situation where the policy is being implemented. Where there is no effective policy monitoring and evaluation it becomes difficult to detect changes and to formulate appropriate changes (Talhouk, 2005).

Public interest in wetland management changes, may meet resistance from the vigilance and close supervision which calls for monitoring and implementation support (UNDP, 2008) Political interference has weakened the implementation of wetland regulations at lower local government, politicians' encouragement of their voters to encroach on the fragile ecosystem. This makes it difficult for NEMA to enforce the law. Monitoring programs provides means of assessing the effectiveness of wetland creation and restoration; Reports form NEMA indicate that village local leaders mobilized residents against the wetland restoration team in Kampala Kinawataka wetland leading to delays in the restoration exercise (Kafuuma *et al*, 2009). Community based institution are a key factor in fostering impact monitoring which looks beyond the immediate result of the policy at the intended and un intended impact positively and negatively which leads to adaptation and adjustment towards socio economic and wetland management system (Wetland Action, 2008).

2.4 Summary

In a bid to address challenges facing wetland management policy implementation several scholars have advanced different views and recommendations putting more emphasis on capacity which comprises of availability of funds, well trained technical staff to administer the policy and a sympathizing environment for successful policy implementation while others forward the need to reduce on the communication gap between policy designers, implementers and recipients. In the above review policy implementation is regarded as a transitional process which calls for monitoring and evaluation at each stage of implementation and by doing so, it become easy to identify challenges and make the necessary adjustments to smooth policy implementation.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the methods that were used in the study. It describes the study population, sample size and selection, sampling techniques and procedures, Data collection methods, Data collection instruments, Pre-testing (validity and reliability), procedure of data collection, data analysis and measurements of variables.

3.1 Research Design

The study was a cross sectional descriptive design which was conducted to find out the opinion of a cross section of the sampled stakeholders about the challenges facing wetland management policy implementation in Namutumba Town Council. Surveys were carried out to obtain information about funding, stakeholders' participation, monitoring and evaluation in the implementation of wetland management policy as stated by (Amin, 2005).

Qualitative methods were applied to get in-depth explanation while quantitative ones were used to get the data needed to meet the required objectives and test the hypotheses as supported by (Amin, 2005). The advantage of using the descriptive design was that it described and reported the way things are across for a certain period and helped to identify gaps and the policy makers to make the necessary intervention for redress (Mugenda & Mugenda, 1999).

3.1.1 Location of the study

The study was carried out in Namutumba Town Council, Namutumba District, Eastern Uganda. Namutumba town council is among the newly created town councils (2006/2007) and it's along Iganga, Tirinyi high way to Mbale. It included five major wetlands located in three wards namely; Namutumba North, Namutumba South and Namutumba East. Wetlands include; Namugingha – Igwali, Nambulamwana, Nawaiibete, Nakhawana and Nakabale.

3.2 The Study Population

The study targeted a total population of 294 respondents and sampled 113 respondents who included officials from National Environment Management Authority (NEMA)(14), Wetland Regional Coordinator (2), Wetland Management Department (MoWE) (4), District Officials from Namutumba(24), Namutumba Town Council staff (14), Namutumba District Land board(6) and members of the Local Environment Committees from three wards (5), Area Land Committee (5), Chairpersons and secretaries for production and environment on village councils (10), community members mainly those involved in wetland farming (24) and community monitoring and evaluation team (5).

3.2.1 Sample Size and Selection Strategies

Given the period for conducting this research and financial constraints, the sample size was limited and selection was based on the following methods; purposive sampling, stratified sampling and random sampling. A total of 69 representing 61% of the total population mentioned above were subjected to questionnaires and these included wetland management department (MoWE), National Environment Management Authority (NEMA), Wetland Regional Coordinator, Namutumba District staff, Namutumba District land board, Namutumba Town

Council Staff while 44 respondents representing 39% of the total population were subjected to interviews and these included; Area Land Committees, Chairpersons and secretaries for production and environment on village councils, community members mainly those involved in wetland farming, Local Environment Committees and community monitoring and evaluation team.

Table 1: Showing the population and sample categories that were sampled.

Population category	Targeted Population	Sample	Sampling technique
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Wetland management department (MoWE)	20	4	Purposive sampling
National Environment Management Authority	60	14	Purposive sampling
Regional coordinator TSU Eastern Region	6	2	Purposive sampling
Namutumba District Staff	46	24	Purposive sampling
Namutumba Town council Staff	17	14	Purposive sampling
District land board	6	6	Census
Area land committee Namutumba T/ C	5	5	Census
Village council committees	99	11	Stratified sampling
Wetland farmers	25	24	Random sampling
Local environment committee	5	5	Census
Community monitoring and evaluation team	5	5	Census
Total	294	113	

Source: Adopted and modified from RVK Rejcie and D. W Mogan in Amin, (2005)

A total of 69 questionnaires were sent and 60 were returned, therefore this research was based on a total number of 60 respondents for quantitative data. While 44 respondents were interviewed, making it a total of 104 respondents.

3.2.2 Sampling Techniques and Procedure

Purposive sampling was applied to some categories of people in the study and locations. This method enabled the researcher to include a range of people and to capture a variety of different situations as recommended by (Amin, 2005).The following category of respondents included;

wetland management department (MoWE), National Environment Management Authority (NEMA), Wetland Regional Coordinator, Namutumba District staff, Namutumba District land board, Namutumba Town Council Staff, Community Monitoring and Evaluation Committee and Local Environment Committee.

Stratified sampling is a sampling method where the population is divided into non overlapping groups or strata according to different characteristics of the population. Within each stratum, are placed items that are more homogenous with respect to the characteristics to be studied or measured. Village council committees are relatively homogenous populations that were divided into their respective wards as per (Amin, 2005). The researcher further arranged respondents in relation to their respective villages and village chairpersons were interviewed.

Random sampling was applied to get members who represented farmers involved in wetland farming within the three wards. A number of 8 wetland farmers were randomly selected from each ward which made up a total of 24 respondents from 3 wards. Census was applied to a category of respondents who, were limited in number and had vital information to provide in this research. A census is an attempt to gather information from each and every person of interest as asserted by (Pink, 2010).

3.3.0 Data Collection Methods and Instruments

Data was collected from the Ministry of water and Environment (wetland inspection division), Namutumba district headquarters, Namutumba town council headquarters, schools, Non-government organizations, statutory boards (NEMA, Local Environment committee and area land committees) village councils and community levels using different methods which

included; document review, face to face interviews, questionnaires, observation and measurements. This was done in order to collect reliable information which helped the researcher to make comparisons from different categories of stakeholders. Conversations were conducted in order to create free flow of information and the probing approach was applied in a bid to get hidden information.

3.3.1 Interview method and Interview guide

The researcher applied face to face interviews to discuss issues with respondents on their perception on both dependent and independent variables contributing to the challenges facing wetland management policy implementation in Namutumba Town Council. The researcher posed questions to members being guided by the interview guide containing semi-structural questions for key information and the purpose was to collaborate findings of the survey analysis and to explore greater in depth relationship suggested by the quantitative analysis as backed by (Amin, 2005). Data collected during the face to face interviews provided a clear understanding of objectives of the study, clarified questions and helped the researcher to collect additional information not captured by self administered questionnaires.

The researcher, in order to execute face to face exercise developed an interview guide with 10 items. This instrument helped the researcher to get in-depth data and the possibility of obtaining data required to meet specific objectives of the study was high. A level of flexibility and sensitive personal information was extracted. Interview guides paved way for the researcher to make clarifications, elaborate and convince the respondent about the importance of the research. (Mugenda & Mugenda, 1999).

3.3.2 Documentary analysis method

The researcher collected secondary data from documentary review, reading journals, dissertations, text books from the internet and Uganda Management Institute library with the aim of establishing what other scholars had written about the study variables. This helped the researcher to reconstruct study variables and provide an in-depth understanding of the variables under investigation in comparison to the area of study.

3.3.3 Questionnaire method

Structured questions were applied for purposes of effective analysis and for ease of respondents in filling the questionnaires. The questionnaire contained issues concerning both dependent and independent variables. Questionnaires were hand delivered and self-administered to give the respondents enough time and space to complete them. They were filled in the respondents' convenience. This increased chances of getting valid information. This method offered greater assurance of secrecy. Sensitive information was given without fear (Amin, 2005). Questionnaires were then collected after filling.

A questionnaire is a list of carefully structured questions, chosen after a considerable testing with a view of eliciting reliable responses from chosen samples, (Hussey & Hussey, 1997). Questionnaires were developed in a bid to acquire important information from the population and to address specific objectives, research questions or hypothesis of the study (Mugenda & Mugenda, 1999). Questionnaires helped the researcher to acquire vast information and within the stipulated time limit (Amin, 2005).

A 5 likert scale rating of 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree was used for the dependent, independent and intervening variable questions as recommended by (Amin, 2005).

3.3.4 Observation check lists and electronic camera

The researcher developed an observation checklist, rating scales were applied since wetlands management involved observing and evaluating and this involved suggesting 5 response categories and using of tape measures (Mugenda & Mugenda, 1999).While an electronic camera was used to capture photos of the current natural wetland outlook.

3.4.0 Reliability

The population that was sampled provided a fair representation of the population under the case study and no single research under this case had been carried out in Namutumba town council, Namutumba district as stated by (Amin , 2005).The researcher examined the procedure for data collection and made sure it was reliable. Reliability is to establish whether a particular technique/research instrument applied repeatedly on the same object, yields similar results each time. To ensure that instruments remain the same over time despite uncontrollable testing conditions a pilot test was done amongst different members of staff in Iganga Town Council who were not included in the study.

Correlation coefficients between the scores were obtained at the different times calculated using the Cronbach's Coefficient Alpha as state by (Amin,2005). Instrument reliability was tested using Cronbach's Coefficient at 95% confidence interval and 5% level of significance. This

helped to identify vague questions and deficiencies, hence making adjustments for a reliable instrument and below are the results as analyzed using The Statistical Package for Social Sciences (SPSS).

Table 2: Showing Reliability Analysis - scale (Cronbach's Alpha)

Variable	No of items	Alpha	Standardized alpha
Funding	14	0.8836	0.8821
Stakeholders' participation	16	0.8808	0.8751
Monitoring and Evaluation	25	0.8943	0.9413

The Cronbach's Coefficient Alpha that measure the reliability of items was computed for the variables to ensure goodness of measure. The results from the table above indicate Cronbach's Coefficient Alphas' that are above 0.50 and this confirms the reliability of the instruments used in the study as backed by (Amin, 2005).

3.4.1 Validity

Validity of the questionnaire was determined, through discussions and consultations with colleagues. The researcher gave the constructed items, to the Supervisor, to rate the relevance of each item. The questionnaires were pilot-tested in Iganga Town Council, to enable the researcher get those that are vague and ambiguous and those that are relevant. A five point rating scale of the Likert scale (Mugenda & Mugenda, 2003) was used in the questionnaires.

Triangulation was used to validate the findings. Triangulation is the examining of an issue from different perspectives of different members of the society in the study area. Content and construct were measured by pre-testing of the instruments.

3.5.0 Procedure for Data Collection

The researcher acquired an introductory letter from Uganda Management Institute, issued out prepared questionnaires to relevant officers, embarked on training Research Assistants and availing them with introductory letters, dispatched Research Assistants to the field and organized group discussion meetings.

3.6.0 Data Analysis

Qualitative data was analyzed through typing up of field notes, sorting and coding of the responses after the interviews. The researcher then interpreted the results and lessons learnt through establishment of patterns and relationships from the information gathered. An in-depth analysis was done to find out whether the information answers the research questions as recommended by (Amin 2005, Mugenda and Mugenda, 2003).

Quantitative data was analyzed using Descriptive statistics tables, pie charts and bar charts. The relationship between variables was analyzed using the Correlation Coefficient method with the help of the Statistical package for Social Science (SPSS) to correlate between variables. Regression analysis was used to determine whether the given independent variables predicate a change in the dependent variable.

CHAPTER FOUR

FINDINGS, DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents the findings of the study in relation to the study objectives. A total of 60 respondents filled the questionnaires on various aspects according to the objectives of the study.

The data collected was edited; coded, tabulated, analyzed, presented and interpreted information provides a basis on which the researcher drew the final conclusion of the study. Data was presented in form of tables on frequencies as suggested in chapter 3 of the research dissertation.

The information in this chapter was obtained mainly using questionnaires, 69 questionnaires were issued out and 60 were filled and collected as in the table below:

Table 3: Showing Response rate

Details	Frequency	Percentage (%)
Response	60	87
Non response	09	13
Total	69	100

Source: primary Data (Field survey)

Those who responded represent 87% and the non-response was 13% as shown above. This quite shows a good turn up and the information provided by the response is a good mark and can be relied on to make a conclusion of the study.

4.1 Background Characteristics

The background characteristics were categorized into basic demographics and economic characteristics.

Table 4: Showing background characteristics

		Frequency	Percent
Age of respondents	15-25	6	10.0
	26-35	33	55.0
	36-45	19	31.7
	46-55	2	3.3
Sex of respondents	Male	42	70.0
	Female	18	30.0

Occupation of respondents	Private employee	8	13.3
	public servant	52	86.7
Academic qualification of respondents	Degree	30	50.0
	Diploma	13	21.7
	A Level	3	5.0
	O Level	4	6.7
	Others(specify)	10	16.7
Marital status of respondents	Single	14	23.3
	Married	44	71.7
	Engaged	3	5.0

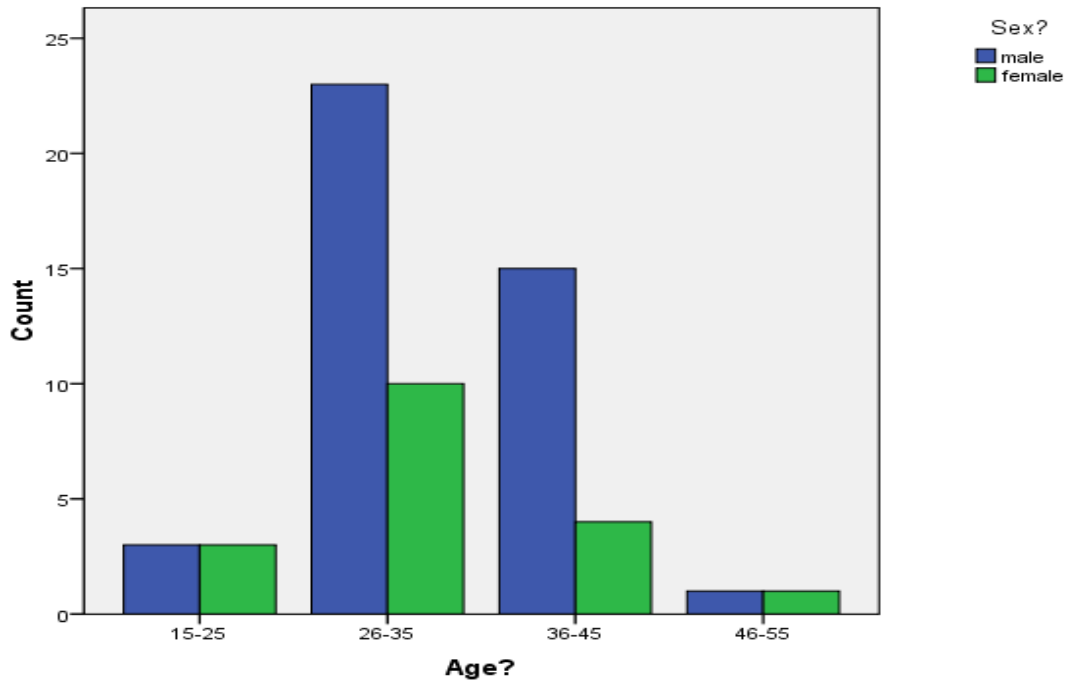
Source: primary Data

From the table above, 86.7 %(52)of the respondents were public servants and a total of 13.3 % (8)were private employees.71.7%(44) of the respondents were married,23.3%(14) were single and 5%(3) were engaged. There were slightly more males 70 %(42) than females 30 %(18).50 %(30) said the highest level of education they had reached was degree. The information provided by the respondents reflects their responsibility and level of understanding in providing appropriate answers to the study. This means that the information that was collected was reliable since the majority respondents were of the highest level of education hence understanding and filling the questionnaire was not a big problem.

4.1.1 Distribution of respondent's age and sex

The researcher asked the respondents to mention their age and sex as illustrated below.

Figure 2: A bar graph showing respondent's age and sex

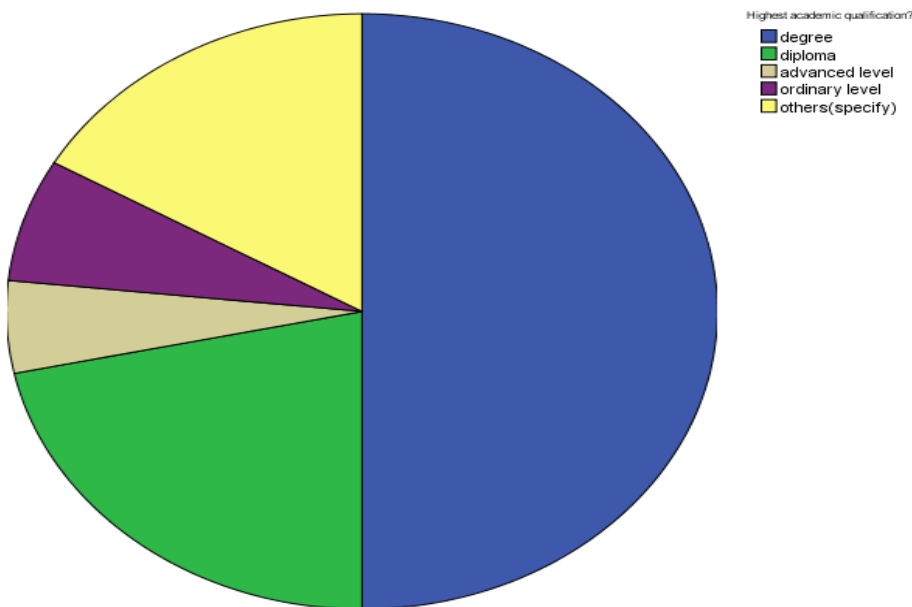


Source: primary Data

In relation to the above graph 70%(42) were male and 30% (18)were female.10%(6) were of age range 15-25,55%(33) were between 26 and 35 years,31.7 %(19)were between 36and45 years, 3.3%(2) were between 46 and 55 years. The majority where from 26-35 years and this result means that the data is reliable since this is the most active age group in community and public service according to this study.

4.1.2 Highest academic qualification

Figure 3: A pie chart showing respondent's highest academic qualification



Source: Primary Data

From the above pie chart 50% were degree holders, 21.7 had diplomas, 5% had advanced level, 6.7 had ordinary level and 16.7% had other qualifications such as Masters and certificates. The implication is that most of the respondents were degree holders and least all the respondents were educated.

4.2 Descriptive Statistics for Challenges Facing Wetland Management Policy

Implementation.

In this study the challenges identified were funding with dimensions of central government transfers, donor funding and local revenue. The second challenge was stakeholders' participation with dimension of community participation and technical personnel support and the third challenge was monitoring and evaluation with its dimensions of implementation progress, restoration and community policy adoption. While under wetland management policy implementation as a dependent variable had a dimension of conservation and sustainability. The intervening variable was population and poverty.

4.2.1 Responses on Central Government Release

The central Government release as a challenge was tested using arithmetic mean and standard deviation to establish its relation with conservation and sustainability. A total of five items were used to measure the concept and the result of the analysis is as indicated below.

Table 5: Showing Descriptive Statistics of Central Government Release

Central Government Release	N	Mean	Standard Deviation
Percentage released for wetland management is enough to facilitate all planned activities in a financial year	60	1.87	1.05
Government releases wetland management funds on time	60	2.17	1.08
Released funds are spent on training the communities in wetland management	56	2.50	1.18
Government sends funds for sensitizing communities on wetland management	60	3.02	1.20
Central Government transfer help technical persons to facilitate implementation of wetland management action plans	60	3.10	1.13
Valid N (listwise)	56		

Source: primary Data

Scale:5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score for central Government Release ranged from 1.87-3.10 whereas the standard deviation varied from 1.05-1.20. The result indicated that a few respondents agreed that the percentage released for wetland management is enough to facilitate all planned activities in a financial year. This implies that the releases are not sufficient to undertake the planned activities. 46% of the respondents with (mean=3.02) agreed that Government sends funds for sensitizing communities on wetland management, respondents with (mean=2.50) disagree that released funds are spent on training the communities in wetland management, respondents with (mean=1.87) disagree that the percentage released for wetland management is enough to facilitate all planned activities in a financial year. While the results from most of the respondents indicate that Central Government Releases help technical persons to facilitate implementation of wetland management action plans.

4.2.2 Responses on Local Revenue Mobilisation

Local Revenue has a total of five items whose arithmetic mean and standard deviation were computed and results were summarized as below.

Table 6: Showing descriptive statistics of Local Revenue Mobilisation

Local Revenue	N	Mean	Std. Deviation
local Government allocate a big percentage of local revenue on wetlands management activities	60	1.97	.97
local wetland management committees are facilitated using locally generated revenue	58	2.24	.94

locally generated revenue from wetlands is used to co-fund grants from central Government	59	2.36	1.17
Local Government get revenue from wetland use	57	2.39	1.06
local revenue helps technical persons facilitate implementation of wetland management plans	60	2.92	.94
Valid N (listwise)	54		

Source: primary Data

Scale:5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The results indicate that the mean score for Local Revenue varied from 1.97-2.92 whereas the standard deviation varied from 0.94-1.17. These results show that a few respondents agreed that local Government allocate a big percentage of local revenue on wetlands management activities while respondents with (mean= 2.92) do agree that local revenue helps technical persons facilitate implementation of wetland management plans. Respondents with (mean=2.39) disagreed that Local Governments get revenue from wetland use and respondents with (mean=2.36) disagreed that locally generated revenue from wetlands is used to co-fund grants from central Government Local Governments have to improve on the allocation of local revenue towards wetland management activities since findings identified a resource gap.

4.2.3 Responses on Donor Funding

Donor funding was another variable under funding that was measured using four items and the arithmetic mean and standard deviation of the variable are presented in the table below.

Table 7: Showing descriptive statistics of Donor Funding

Donor Funding	N	Mean	Std. Deviation
Donor community finance wetland restoration programmes	58	2.69	1.03
local governments are linked to donor communities for wetland management funding	59	2.81	1.27
Donor funds are used to facilitate wetland conservation and management	59	2.92	1.10
Donors send funds for implementing wetland management policy	60	3.00	1.10
Valid N (listwise)	56		

Source: primary Data

Scale: 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score of Donor Funding ranged between 2.69-3.00 while the standard deviation varied between 1.03-1.27. The results of the analysis implies that a few respondents (mean=2.69) agree that Donor community finance wetland restoration programmes, respondents with (mean=2.81) disagree that local governments are linked to donor communities for wetland management funding while the respondents with (mean=3.00) agree that Donors send funds for implementing wetland management policy and respondents with (mean=2.92) disagree that donor funds are used to facilitate wetland conservation and management but those that agreed were mostly public servants.

4.3 Stakeholders' Participation

Descriptive data for stakeholders' participation was also tested using arithmetic mean and standard deviation to establish its relationship with conservation and sustainability.

4.3.1 Responses on Community Participation

Community participation has a total of nine items whose arithmetic mean and standard deviation were computed and summarized as illustrated in the table below:

Table 8: Showing descriptive statistics of community participation

Community Participation	N	Mean	Standard Deviation
Community Understands Wetland Conservation Management Policies, Laws And Regulations	58	2.14	1.07
Local Wetland Management Committee Is Fully Functional	60	2.18	.97
Community Practice Wetland-Friendly Activities	59	2.29	1.15
Local Government Facilitates Wetland Management Committees	60	2.32	1.03
Community Wetland Management Plan In Place	60	2.48	1.08
Community Has Established Local Wetland Management Committees	59	2.54	1.02
Community Is Aware Of The Number Of Wetlands Surrounding Them And Apply Wise Use	59	2.59	1.21
Community Understands The Values Of Wetlands	60	3.18	1.11
Community Is Involved In Wetland Management Policy	58	3.21	1.02

Implementation			
Community Benefit From The Wetlands	60	4.33	.88
Valid N (Listwise)	55		

Source: primary Data

Scale: 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score of community participation ranged from 2.14-4.33 whereas the standard deviation varied from 0.88-1.21. The results indicate that majority of the respondents (mean=4.33) agreed that community benefits from the wetlands however a few of the respondents (mean=2.14) agreed that community understands wetland conservation management policies, laws and regulations. This implied that the community is not aware of wetland management policies though they benefit from practicing in wetland activities. Respondents with (mean=3.21) agreed that community is involved in wetland management policy implementation, respondents with mean=3.18 agreed that community understands the values of wetlands, respondents with (mean=2.59) disagreed that Community is aware of the number of wetlands surrounding them and apply wise use, respondents mean.

4.3.2 Responses on Technical Personnel Support

Technical personnel support was tested using five items whose arithmetic mean and standard deviation was computed and the results are shown in the table below.

Table 9: Showing descriptive statistics of Technical Personnel support

Technical Personnel Support	N	Mean	Standard Deviation

Sufficient technical manpower to implement wetland management policies	59	2.58	1.23
All offices are equipped with the necessary wetland management policy document	60	2.62	1.01
Law enforcement officers often approach the community on wetland management policy issues	59	2.73	1.13
Wetland management policy issues are always considered during the planning period	57	3.00	1.16
Technical persons often inducted wetland management committee on wetland related issues	60	3.18	1.03
Technical persons have a clear mode of communication during mobilization of wetland users	60	3.23	1.01
Valid N (listwise)	57		

Source: primary Data

Scale: 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score for technical personnel support ranged from 2.58-3.23 whereas the standard deviation varied from 1.01-1.23. The results indicate that a few respondents agreed that there is sufficient technical manpower to implement wetland management policies. This implies that there is not enough technical manpower to manage the implementation process. Respondents with (mean=3.18) agreed that technical persons often inducted wetland management committee on wetland related issues, respondents with (mean=3.00) agreed that Wetland management policy issues are always considered during the planning period, results indicate that majority respondents (mean=3.23) agreed that technical persons have a clear mode of communication during mobilization of wetland users. Respondents with (mean =2.62) disagreed that all offices are equipped with the necessary wetland management policy documents.

4.4 Monitoring And Evaluation

Descriptive statistics for monitoring and evaluation where test using arithmetic mean and standard deviation to establish the relationship with conservation and sustainability.

4.4.1 Responses on Implementation Progress

Implementation progress was measured using five items. The arithmetic mean and standard deviation of the variable are illustrated in the table below.

Table 10: showing descriptive statistics of implementation progress

Implementation Progress	N	Mean	Standard Deviation
Many Wetland Users have Acquired Wetland User Permits	60	1.93	.84
Wetland User Committees In Place	59	2.34	1.01
Schedule for Training Wetland Users	57	2.37	.96
Compliance Monitoring of Wetlands	60	2.77	1.09
Wetland Management Implementation Action Plan Available	59	2.95	.99
Valid N (Listwise)	57		

Source: primary Data

Scale: 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score for implementation progress ranged between 1.93-2.95 while the standard deviation varied between 0.84-1.09. These results indicate that a few respondents(mean=1.93)

agree that many wetland users have acquired wetland user permits. This implies that many of the wetland users are engaged in wetland activities illegally. Respondents with (mean=2.77) disagreed that there is Compliance monitoring of wetlands, respondents with (mean=2.34) disagreed that wetland user committees are in place however most of the respondents with (mean=2.95) agreed that wetland management implementation action plan available.

4.4.2 Responses on Restoration

Restoration was measured using six items. The arithmetic mean and standard deviation of the variables is illustrated in the table below.

Table 11: Showing descriptive statistics of Restoration

Restoration	N	Mean	Standard Deviation
Large percentage of degraded wetlands have been restored	59	2.14	1.02
Restoration reports in place	60	2.77	1.06
Restoration plans in place	60	2.87	1.13
Restoration orders available	60	2.88	1.12
Improvement notices issued	60	2.90	1.13
Is there any wetland restoration program	60	3.37	4.07
Valid N (listwise)	59		

Source: primary Data

Scale: 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score for restoration ranged between 2.14-3.37 while the standard deviation varied between 1.02-4.07. These results indicate that a 11.7% of the respondents (mean=2.14) agree that

a large percentage of degraded wetlands have been restored. The results implied that restoration component is not in practice. Respondents with mean=2.77 disagreed that restoration reports are in place, respondents with mean =2.87 disagreed that restoration plans are in place, respondents with mean=2.90 disagreed that improvement notices were issued. Majority respondents (mean=3.37) agreed that there is a wetland restoration program. Thus the restoration should be enhanced to impact on conservation and sustainability.

4.4.3 Responses on Community Policy Adoption

Community policy adoption was measured using six items. The arithmetic mean and standard deviation of the variables are illustrated in the table below.

Table 12: Showing descriptive statistics of Community policy adoption

Community Policy Adoption	N	Mean	Std. Deviation
Adherence to policy provisions by community	60	2.17	.96
High level of policy appreciation by community	60	2.18	1.00
Maximum awareness of wetland management policy by community	60	2.33	1.08
Community based wetland committee do exist	60	2.48	.93
Community based wetland management plan are in place	59	2.49	1.06
Community has demarcated wetlands	59	2.54	1.13
Valid N (listwise)	58		

Source: primary Data

Scale: 5=strongly agree, 4=agree, 3= neutral, 2=disagree and 1=strongly disagree

The mean score for community policy adoption ranged between 2.17-2.54 whereas the standard deviation varied between 09.3-1.13. These results indicate that a few respondents 10% with (mean=2.17) agree that there is adherence to policy provisions and a high level of policy appreciation by community. This implied that the community partially disagrees with the implementation of wetland conservation and sustainability policy. Respondents with mean=2.33 disagreed that there is maximum awareness of wetland management policy by community, respondents with mean =2.18 disagreed that there is high level of policy appreciation by community While 25% of the respondents (mean=2.54) agreed that there is community wetland zonation or demarcation.

4.5 Responses on Conservation and Sustainability

Conservation and sustainability was measured using seven items. The arithmetic mean and standard deviation of the variables are illustrated in the table below.

Table 13: Showing descriptive statistics of Conservation and sustainability

Conservation And Sustainability	N	Mean	Standard Deviation
Local Government Have Enough Technical Manpower To Implement The Wetland Management Policies	60	2.58	1.24
Communities Are Aware About The Existence Of Wetland Management Policies	60	2.62	1.14
Local Government Have Ably Managed To Conserve And Sustain All Wetlands In Areas Of Jurisdiction	60	2.08	.87
More Emphasis Place On Long Term Wetland Management Plans For Conservation And Sustainability	59	3.14	1.15
Several Wetland Conservation Measures Put In Place By Local	60	2.90	1.08

Government			
These Measures Are Backed By Wetland Management Byelaws And Ordinances	58	2.69	1.11
Communities Strongly Contributed Towards Wetland Conservation	59	2.29	1.00
Valid N (Listwise)	57		

Source: primary Data

Scale: 5=strongly agree, 4=agree,3= neutral, 2=disagree and 1=strongly disagree

The mean score for conservation and sustainability ranged between 2.08-3.14 while the standard deviation varied between 0.87-1.24. The results from the table indicate that respondents with (mean=2.08) 8.3% of the respondents agree that Local Government have ably managed to conserve and sustain all wetlands in areas of jurisdiction while 43.3% respondents with (mean=3.14) agree that more emphasis has been placed on long term wetland management plans for conservation and sustainability. Respondents with mean =2.58 disagreed that Local Government have enough technical manpower to implement the wetland management policies, respondents with mean=2.62 disagreed that communities are aware about the existence of wetland management policies, respondents with mean =2.90 agree that several wetland conservation measures put in place by local government.

4.6 Correlation Analysis Results

A correlation analysis was computed to establish the degree, direction and strength of the relationship between challenges With the following dimensions of Funding, Stakeholder Participation and monitoring and Evaluation as independent variables and Wetland Management Policy Implementation as dependent variable with dimensions of conservation and the dimensions for funding are Central Government Release, Local Revenue Mobilization, Donor

funding. Under stakeholder participation dimension are community participation and Technical personnel support and for monitoring and evaluation the dimensions are implementation progress, Restoration progress and Community policy adoption.

Table 14: showing correlation results for the dependent and independent variables

		Central Government Release	Local Revenue	Donor Funding	Community Participation	Technical personnel support	Implementation Progress	Restoration	Community Policy Adoption	Conservation & Sustainability
Central Government Release	Pearson Correlation	1	.429**	.522**	.348**	.394**	.513**	.367**	.388**	.216
	Sig. (2-tailed)		.001	.000	.007	.002	.000	.004	.002	.097
	N	60	60	60	60	60	60	60	60	60
Local Revenue	Pearson Correlation	.429**	1	.401**	.560**	.526**	.591**	.474**	.718**	.477**
	Sig. (2-tailed)	.001		.001	.000	.000	.000	.000	.000	.000
	N	60	60	60	60	60	60	60	60	60
Donor Funding	Pearson Correlation	.522**	.401**	1	.327*	.322*	.422**	.232	.399**	.202
	Sig. (2-tailed)	.000	.001		.011	.012	.001	.074	.002	.121
	N	60	60	60	60	60	60	60	60	60
Community Participation	Pearson Correlation	.348**	.560**	.327*	1	.740**	.820**	.567**	.716**	.591**
	Sig. (2-tailed)	.007	.000	.011		.000	.000	.000	.000	.000
	N	60	60	60	60	60	60	60	60	60
Technical	Pearson Correlation	.394**	.526**	.322*	.740**	1	.746**	.425**	.606**	.618**

personnel support	Sig. (2-tailed)	.002	.000	.012	.000		.000	.001	.000	.000
	N	60	60	60	60	60	60	60	60	60
Implementation Progress	Pearson Correlation	.513**	.591**	.422**	.820**	.746**	1	.607**	.718**	.553**
	Sig. (2-tailed)	.000	.000	.001	.000	.000		.000	.000	.000
	N	60	60	60	60	60	60	60	60	60
Restoration	Pearson Correlation	.367**	.474**	.232	.567**	.425**	.607**	1	.549**	.373**
	Sig. (2-tailed)	.004	.000	.074	.000	.001	.000		.000	.003
	N	60	60	60	60	60	60	60	60	60
Community Policy Adoption	Pearson Correlation	.388**	.718**	.399**	.716**	.606**	.718**	.549**	1	.704**
	Sig. (2-tailed)	.002	.000	.002	.000	.000	.000	.000		.000
	N	60	60	60	60	60	60	60	60	60
Conservation and Sustainability	Pearson Correlation	.216	.477**	.202	.591**	.618**	.553**	.373**	.704**	1
	Sig. (2-tailed)	.097	.000	.121	.000	.000	.000	.003	.000	
	N	60	60	60	60	60	60	60	60	60

** . Correlation is significant at the 0.01

level (2-tailed).

From the table above results indicate that the relationship between central Government Release, Donor funding and conservation and sustainability is weak. According to (Amin 2005), score from 0.02 to 0.03 indicate a weak correlation co efficiency at 0.216(21.6%) and 0.202 (20.2%) and the level of significance was 0.097 and 0.121 respectively. Results indicate that the relationship between Local revenue, Community participation, technical personnel support, Implementation progress Restoration progress and Conservation and sustainability was moderate

at 0.000 level of significance. In the table above results indicate that the relationship between Community Policy Adoption and conservation and sustainability was strong with a correlation coefficient of 0.704 at 0.000 level of significance. In this study, after establishing that some variables had a weak correlation while others were moderate and strongly correlated the researcher applied linear regression analysis to ascertain whether the challenges of wetland management policy implementation have a relationship with conservation and sustainability of wetlands and to test the hypotheses as in chapter one.

4.7 Regression Results

Regression analysis was used to test hypotheses and to ascertain whether the challenges of wetland management policy implementation have a relationship with conservation and sustainability of wetlands.

4.7.1 Analysis for Challenges of Wetland Policy Implementation

Table 15: Showing model summary of the multiple linear regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.759 ^a	.577	.510	.49672	.577	8.683	8	51	.000

Source: primary Data

- a. Predictors: (Constant), Community Policy Adoption, Central Government Release, Donor Funding, Restoration, Technical personnel support, Local Revenue, Community Participation, Implementation Progress
- b. Dependent Variable: Conservation and Sustainability

According to the model summary above the correlation coefficient is $R=0.759$ (76%), indicating the strong strength of association between the challenges of wetland management policy implementation and conservation and sustainability. The R square is 0.577 (57.7%). This is the amount of variance in conservation and sustainability (dependent variable) that is explained by the challenges (independent variable).

The Adjusted R square is 0.510 (51%) meaning that the variance in conservation and sustainability is explained by the challenges of wetland management policy implementation taking into all the variables and the sample size and the remaining 49% are explained by other factors.

4.7.2 Multiple Linear Regression Results Showing Correlation Coefficients

The results in the table below helped the researcher to establish which among the independent variables generates most variation in the dependent variable. The results of the coefficients determine whether the hypotheses are substantiated or not.

Table 16: Multiple Regression Results

Model	Un standardized coefficient		Standardized coefficient	T	Sig.
	B	Std. Error	Beta		
1 (constant)	.820	.334		2.452	.081
Central Government Release	-.058	.107	-.065	-.545	.588
Local Revenue	-.073	.136	-.074	-.539	.592
Donor Funding	-.055	.079	-.078	-.701	.486
Community Participation	.034	.202	.030	.167	.868
Technical Personnel Support	.352	.141	.368	2.488	.016
Implementation Progress	-.077	.191	-.079	.103	.689
Restoration	-.017	.074	-.027	-.226	.822
Community Policy Adoption	.573	.145	.640	3.952	.000

Source: primary Data

4.7.3 Relationship between Funding and Wetland Management Policy Implementation

The multiple regression analysis results in the table 18 indicate that Central Government Release has no relationship with Conservation and sustainability basing on ($\beta=-0.065$) This means that sensitizing, training the community and increasing the percentage releases of funds for wetland management has no adverse contribution towards conservation and sustainability of wetlands

while decreasing the percentage releases of funds, not sensitizing and training the community about wetland management will have no contribution towards conservation and sustainability.

The results in table 18 indicated that local revenue ($\beta=-0.074$) had no relationship with conservation and sustainability. This means that increasing local revenue will have no contribution towards conservation and sustainability similarly decreasing local revenue would have no impact on conservation and sustainability.

From the table 18 Donor funding with ($\beta=-0.078$) had no relationship with conservation and sustainability. This implies that donor funding has no contribution towards the implementation of wetland management policy. Thus increasing or decreasing donor funding will have no impact on conservation and sustainability of wetlands.

In conclusion according to the results funding has no significant relationship with wetland management policy implementation.

4.7.4 Relationship between Stakeholders' Participation and Wetland Management Policy Implementation.

The multiple regression results indicate that community participation with ($\beta=0.030$) has a positive relationship with conservation and sustainability with its level of significance at (0.868) which is not significant. This implies that an increase or decrease in community participation does not improve on conservation and sustainability of wetlands.

Results from table 18 show that technical personnel support with ($\beta=0.368$) is positively related with conservation and sustainability and the relationship was significant ($\text{sig}=0.016$). This means that an increase in technical personnel support will lead to an increase in wetland conservation and sustainability. A decline in technical personnel support leads to a decrease in wetland conservation and sustainability.

4.7.5 Relationship between Monitoring and Evaluation and Wetland Management

Policy Implementation.

The regression results in table 18 indicate that implementation progress with ($\beta=-0.079$) has no relationship with conservation and sustainability. This means that improving or decreasing the implementation progress will have no impact on conservation and sustainability of wetlands.

From the table 18 results show that restoration with ($\beta=-0.027$) has no relation with conservation and sustainability and even the level of significance was weak at ($\text{sig}=0.822$). This implies that an increase or decrease in wetland restoration progress does not contribute to wetland conservation and sustainability.

The results in table 18 indicate that community policy adoption with ($\beta=0.640$) has a positive relationship with conservation and sustainability of wetlands at 0.000 level of significance. This means that an increase in community policy adoption will definitely increase conservation and sustainability of wetlands on the other hand a decrease in community policy adoption will lead to a decrease in conservation and sustainability of wetlands.

4.8 Summary of results for hypothesis testing

In conclusion the two variables of community policy adoption and technical personnel support explain the variance of 0.577 (57.7%) in conservation and sustainability of wetlands. Community policy adoption was highest with $\beta=0.640$ at 0.000 level of significance and technical personnel support with $\beta=0.368$ at 0.016 level of significance. The results implied that the two variables have a significant contribution towards wetland conservation and sustainability. While, community participation had a positive relationship but with a weak significance and the other independent variables of Central Government Release, local revenue, donor funding, implementation progress and restoration had a negative relationship.

Table 17: Showing summary results for hypotheses testing

Hypothesis	Variables	Coefficients beta	Sig	Results of hypothesis
H1	Central Government Release	-.065	.588	Not supported
	Local Revenue	-.074	.592	Not supported
	Donor Funding	-.078	.486	Not supported
H2	Community Participation	.030	.868	Supported (not significant)
	Technical personnel support	.368	.016	Supported
H3	Implementation Progress	-.079	.689	Not supported
	Restoration	-.027	.822	Not supported
	Community Policy Adoption	.640	.000	Supported

Source: primary Data

Hypothesis 1

Funding has significant relationship with wetland management policy implementation in Namutumba Town council. This hypothesis was not supported as indicated in table 19. Thus the hypothesis was rejected.

Hypothesis 2

Stakeholder participation has a significant relationship with wetland management policy implementation in Namutumba Town council. Hypothesis 2 was supported and hence accepted.

Hypothesis 3

Monitoring and evaluation has a significant relationship with wetland management policy implementation in Namutumba Town council. Hypothesis 3 was partially supported basing on the fact that two variable were not supported yet one variable was strongly supported and significant with ($\beta=0.640$) at 0.000 level of significance.

4.9. The Influence of Population and Poverty on Conservation and Sustainability

Table 18: showing a model summary of the influence of population and poverty on conservation and sustainability

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.478 ^a	.228	.187	.64006	.228	5.516	3	56	.002
2	.667 ^b	.445	.394	.55258	.217	10.568	2	54	.000
3	.759 ^c	.577	.510	.49672	.131	5.277	3	51	.003
4	.766 ^d	.586	.512	.49604	.009	1.138	1	50	.291

Source: primary Data

The results from the table above show model 4 which indicate that the influence of population and poverty has an R value of 0.766 (76.6%) showing a strong strength of association between the challenges of wetland management policy implementation, conservation and sustainability and population and poverty. The R square value is 0.586 (58.6%), this is the amount of variance in conservation and sustainability that is explained by the variables in the model, the mediating variable population and poverty the 41.4 is explained by other factors. The Adjusted R square is 0.512 which show that the model was a good fit according to (Amin, 2005).

Table 19: showing the influence of population and poverty on each of the independent variables

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.420	.341		4.169	.000
	Central Government Release	.009	.129	.010	.069	.945
	Local Revenue	.466	.133	.470	3.516	.001
	Donor Funding	.006	.100	.009	.061	.951
2	(Constant)	.585	.352		1.663	.102
	Central Government Release	-.075	.113	-.083	-.658	.513
	Local Revenue	.188	.131	.190	1.443	.155
	Donor Funding	-.023	.086	-.033	-.268	.790
	Community Participation	.268	.176	.241	1.522	.134
	Technical personnel support	.366	.149	.383	2.458	.017
3	(Constant)	.820	.334		2.452	.018
	Central Government Release	-.058	.107	-.065	-.545	.588
	Local Revenue	-.073	.136	-.074	-.539	.592
	Donor Funding	-.055	.079	-.078	-.701	.486
	Community Participation	.034	.202	.030	.167	.868
	Technical personnel support	.352	.141	.368	2.488	.016
	Implementation Progress	-.077	.191	-.079	-.403	.689
	Restoration	-.017	.074	-.027	-.226	.822
	Community Policy Adoption	.573	.145	.640	3.959	.000
4	(Constant)	1.343	.593		2.264	.028
	Central Government Release	-.090	.111	-.100	-.809	.423
	Local Revenue	-.085	.136	-.086	-.625	.535
	Donor Funding	-.037	.081	-.052	-.453	.652
	Community Participation	.054	.202	.049	.269	.789
	Technical personnel support	.356	.141	.373	2.524	.015
	Implementation Progress	-.069	.191	-.071	-.362	.719
	Restoration	-.011	.075	-.017	-.144	.886
	Community Policy Adoption	.533	.149	.595	3.570	.001
	Population And Poverty	-.115	.108	-.107	-1.067	.291

a. Dependent Variable: Conservation And Sustainability

Source: primary Data

Results from the table indicate that in model 4 the intervening variable is added to the equation and community participation with ($\beta=0.049$) has a positive relationship with conservation and sustainability but its not significant. Technical personal support with ($\beta=0.373$), sig (0.015) and community policy adoption with ($\beta=0.595$),sig(0.001) are positively related with conservation

and sustainability. Population and poverty with ($\beta=-0.107$), sig (0.291) is negatively related with conservation and sustainability and hence not significant.

4.10 Results from Respondents Interviewed

A total of 24 key respondents were not aware of any funds related to wetland and management. 18 respondents from a total of 44 disclosed that they are only aware about the money they pay to wetland owners for hiring the wetlands and village Council do not receive any funding for wetland management policy implementation. However members acknowledge that they have been sensitized once by the District Natural Resource Officer on wetland cultivation and most of them believe that it was part of wetland farming.

Members acknowledge that they did not know that their methods of farming are destroying the wetlands and they accepted that they have witnessed changes in the status of the wetlands for example sighted that these days wetlands dry up very quickly, to them this is attributed to many people increasingly getting engaged in wetland activities.

One respondent Moses Maleka said, "Most of us benefit from wetlands through rice cultivation for those who have money use ox-ploughs and those without cultivate using the hoes at times individually or through a group". He insisted that since they were sensitized by the Namutumba District Natural Resource Officer their attitudes are changing towards conservation but they do not understand the conservation methods.

One member in the Names of Daga asserted that we may be destructing the wetlands though ignorance because we don't know whether we are destroying or conserving because for us we

just cultivate and our main target is to have high production or cultivation in so doing one has to till larger parts of the wetland. More so most of us wish to cultivate near the waters because at times we need plenty of water. During the rainy season we open up water control stops to let this water run freely because at times too much water cause floods in our gardens or rice blocks.

When going to cultivate we prepare our blocks by slashing all those weeds around our blocks and make sure that most of the palm trees are cut down because they harbour birds which tend to disturb us by destroying our rice during the milk stage. But we confess that after cutting down those trees we don't replant or replace.

In most cases we give these wetlands time to recover because during the off season we do not conduct any digging apart from cattle rearing and more so the water are not enough to sustain rice growing best at times we do plant maize on top of the ant hills.

Members from Kangulumo zone revealed that they have never seen any technical officer disseminating information concerning wetland conservation. They only recall Ikaba son of Mr. Kumbuga Saleh working at the District stopped people from cultivating in the wetlands of Namughigha Igwala forcefully without giving any reason. The community reacted by promising to lynch him with pangas because they earned their living from the wetlands and land belongs to the community.

The respondents interviewed revealed that they have never seen any person from Government supervising because most of them owned these wetlands and other people hire them.

Lubbale Martin said, " these are our routine activities why should someone supervise us yet they contribute nothing apart from planning to garb our land". Previously when the NAADS programme was promoting up land rice scheme the sub county NAADS Coordinator used to come because we had informed him that upland rice does well in wetlands so he only came to prove, otherwise he did not regulate on wetland use.

Mr. Nyomba, a member on the local environment committee confessed that apart from advocating for not cutting trees and planting more they are not aware of any wetland policy law or regulation, so he wondered how they would start monitoring wetlands and so they lacked the technical guidance about what is supposed to be monitored. The local environment committee in these villages only advise members to plant more trees but not in wetlands. To make matters worse some of the local environment committee members are wetland farmers so they cannot afford to lose money in terms of rice cultivation and hiring their wetlands.

The chairperson area land committee Mr. Maseege Faruk revealed that apart from the instruction received from the secretary land board not to lease wetlands, no sensitization concerning wetlands management policy has been conducted . In most of the sensitization meetings held wetlands are noticed to be under environmental degradation and facilitators only emphasize that the community is destroying wetlands surrounding them and recommend for preservation but the methods of preservation are not mentioned. Members agreed that there is a population increase in Namutumba Town Council due to improved facilities such as piped water, roads, cheap plots of land and availability of market and construction materials. The influx in population has

resulted into loss of land and small retail businesses belonging to the natives due to high business competition hence resorting to rice cultivation in wetlands for survival.

4.11 Results from observation and documentary analysis

The researchers applied Observation check lists and electronic camera to capture pictorial information and below were the results:

Wetland destruction in Namughinga Iguaali Swamp Namutumba North ward, Namutumba town council



Wetland destruction by vegetation burning and deforestation in Naghwano wetland Namutumba Town Council south ward



Cattle grazing and Potatoe growing in Nambulamwana wetland –Namutumba Town council



**Wetland degradation by burning.(Nawaibete wetland) in Namutumba central ward
Namutumba Town Council.**



Cultivation in the wetland mainstream-Namughinga Iguali swamp Namutumba North ward, Namutumba town council.



All the empirical evidence above show a clear image of wetland activities practiced in Namutumba Town Council which contributes to massive wetland destruction.

CHAPTER 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents and summarizes the research findings, makes conclusions and recommendations based on the study objectives as well as the hypotheses formulated at the beginning of the study.

5.1 Summary

The purpose of the study was to assess the challenges facing wetland management policy implementation in Namutumba town council. The study was guided by three objectives derived from the general objective namely, To examine the relationship between stakeholders participation and wetland management policy implementations in Namutumba town council, to assess the relationship between Monitoring and Evaluation and wetland management policy implementation in Namutumba town council, to examine the relationship between funding and wetland management policy implementation in Namutumba town council.

Data was collected using three methods which included questionnaires for quantitative data, document analysis and interviews using interview guide for qualitative data. The researcher analyzed quantitative data using the Statistical Package for Social Science (SPSS). This involved generating a unique identifier for each questionnaire, coding responses, developed the data entry screen and entered raw data into the computer for processing. Qualitative data was organized into themes from the raw information got from the respondents and the researcher used his skills in sorting responses in relation to the objectives of the study. The data was presented in three themes, namely; Social characteristics of respondents, respondents' opinion on each of the items relating to a particular objective and study findings according to hypotheses.

The study findings indicated that funding had no relationship with wetland management policy implementation. This was because the Government had small budget allocation for environmental management. Stakeholder participation had a significant relationship with wetland management policy implementation, technical personnel support and community participation were a necessary prerequisite in wetland conservation. Under Monitoring and Evaluation, community policy adoption was more significant than wetland restoration and policy implementation progress.

5.2 Discussion

Below are the discussions of the results objective by objective.

5.2.1 Relationship of funding towards wetland management policy implementation.

The results indicated that Central Government Release has no relationship with Conservation and sustainability. This meant that sensitizing, training the community and increasing the percentage releases of funds for wetland management has no strong relationship with conservation and sustainability of wetlands. This is in contrary with (CANARI,2006) who emphasizes that funding of a policy is one of the most important component which leads to policy implementation success, lack of financial resources in facilitating and contributing to participatory processes in the wetland policy implementation leads to a policy failure.

The top-down approach applied in China, involves economic incentive towards local governments. The amount of compensation to local farmers was a key assurance to successive

implementation of wetland conservation (Jua & Huo, 1998). Striking a balance is a demonstration project of wetlands and poverty reduction: it was carried out under the umbrella of wetlands international and financed by Dutch ministry of foreign Affairs (Wetland Action, 2008).

The results indicated that local revenue had no relationship with conservation and sustainability. This meant that increasing local revenue will have no contribution towards conservation and sustainability similarly decreasing local revenue would have no impact on conservation and sustainability. However in the approved structure plan(1994) of city council of Kampala Nakivubo wetland was gazetted as a green Zone or belt, to the contrary KCC is generating local revenue out of the infrastructures and activities such as Jua kali established in the wetlands instead of implementing the structural plan, (MoWL&E , 2001). This kind of revenue generation impedes the implementation of Wetland policies since Local Government is using it as one of its local revenue sources.

According to the findings, Donor funding had no relationship with conservation and sustainability. This implies that donor funding has no contribution towards the implementation of wetland management policy. This is not in agreement with (Mafabi *et al* , 2005) who appreciates that funding has facilitated the Wetland inspection department through research, surveying of valuable wetlands in Uganda and making of the available reports of wetlands. However, he argues that for wetland management policy implementation to succeed there is need to fund lower communities or community based initiatives.

According to the respondents who were interviewed, a total of 24 farmers were not aware of any funds related to wetland management and in addition the chairpersons of the village councils denied receiving any funding for wetland management implementation. 18 respondents disclosed that they only aware of the money they pay to wetland owners for hiring there wetlands. However the respondents acknowledged that since the establishment of Namutumba Town Council they have only been sensitized on wetland farming only once by the District Natural Resources Officer.

5.2.2 Relationship of the stakeholder's participation towards wetland management policy implementations.

The results indicate that community participation has a positive relationship with conservation and sustainability but not significant. This implied that an increase or decrease in community participation had a minimal impact on conservation and sustainability of wetlands. This is in agreement with (Patrick & Lee, 1997) who stressed that the success of any policy depends on the extent of local people involvement. Rural households are dependent on wetlands as a source of their livelihood and income therefore they understand their environment and socio-economic benefits accruing out of wetlands. Community involvement helps policy designers and implementers to assess varied impacts of the policy on different groups in society.

Walker(1999), put it right that increased emphasis on participation of local communities in resource management and decision making provides important opportunities for improving both the effectiveness and equity of conservation programs. Sustainable development can only be achieved with the participation and support of rural communities. However, policies which deny

local people participation or access and control over wetland resources traditionally face strong resistance. Although democratization is a key to community based environmental management, its prudent that in the short run can present a threat to the environment if top-down conservation enforcement is curtailed without adequate local institution in place to fill the gaps, and where increased political sensitivity to local needs intensifies pressure to exploit resources for immediate economic benefits.

The respondents said in 2009 the District Natural resource Officer trained them in Wetland conservation and they appreciated the knowledge provided about wetlands. They confessed that the wetland destruction was due to their ignorance for example destruction of wetland vegetation, cultivating within the wetland water mainstream and bush burning as evidenced in the photographs on appendix (vi).

Results showed that technical personnel support is positively related with conservation and sustainability and the relationship is significant. This means that an increase in technical personnel support will lead to an increase in wetland conservation and sustainability. A decrease in technical personnel support will mean a decrease in wetland conservation and sustainability. This is in agreement with (Nema,2000) which emphasize that Local wetland management committees and environmental focal persons at lower local Government determine the level of wetland policy implementation and conservation More so reports presented to members of parliament by NEMA indicate that district local councils were involved in the selling of Kinawataka wetland Wakiso district, Nakivubo and Lubigi Kampala wetlands hence failing the policy (Kafuuma & Bekunda, 2009).

Community members responded that previously no technical Officer had provided them with information concerning wetland conservation but the District Environment officer Ikaaba Dauda stopped them from cultivating in Namughianga-Igwaale forcefully without any reason, in reaction the community retaliated by threatening to kill him.

5.2.3 Assessing the relationship of Monitoring and Evaluation towards wetland management policy implementation in Namutumba Town Council

Results indicated that implementation progress had no relationship with conservation and sustainability. This meant that improving or decreasing the implementation progress will have no impact on conservation and sustainability of wetlands. While (Talhouk,2005) emphasizes that Monitoring and evaluation help to detect changes and enable policy implementers to adjust in their designs according to the situation where the policy is being implemented and where there is no effective policy monitoring and evaluation it becomes difficult to detect changes and to formulate appropriate designs. Public Interest in wetland management changes may meet resistance from the vigilance and close supervision which calls for monitoring and implementation support (UNDP, 2008) Political interference has weakened the implementation of wetland regulations at lower local government, politician's encouragement of their voters to encroachment on the fragile ecosystem. This makes it difficult for Nema to enforce the law (Kafuuma & Bekunda , 2009). Respondents said that they have never seen any technical or political personnel carrying out supervision on wetland activities they claimed that the wetlands belong to them so they don't need any supervision. When the National Agriculture Advisory Services (NAADS) programme was promoting upland rice growing the sub-county NAADS

coordinator came to prove that upland rice does well in wetlands but not to regulate on wetland use.

The results showed that restoration had no relationship with conservation and sustainability and with a weak level of significance. This implies that an increase or decrease in wetland restoration progress does not contribute to wetland conservation and sustainability. This is in agreement with Monitoring programs which provide means of assessing the effectiveness of wetland creation and restoration. On the contrary reports from NEMA indicate that village local leaders mobilized residents against the wetland restoration team in Kampala Kinawataka wetland leading to delays in the restoration exercise (Kafuuma *et al*, 2009). However respondents explained that there was no need to apply scientific methods in restoring wetlands to them it was a question of emphasizing the policy.

The respondents said that the Local Environment committees only advocate for replanting and planting of trees but not in wetlands. Mr. Nyombi a resident of Kangulumo south near Nawaiibete wetland commented that though being a member of the Local Environment Committee they are not aware of any policy, law or regulation regarding wetland monitoring therefore it became difficult to monitor wetland activities without any technical guidance. Results indicate that community policy adoption had a significant positive relationship with conservation and sustainability of wetlands. This implied that an increase or decrease in community policy adoption would definitely increase or decrease conservation and sustainability of wetlands. This is in agreement with (Wetland Action, 2008) which states that community based institutions are a key factor in fostering impact monitoring which looks beyond the immediate result of the policy at the intended and unintended impact positively and negatively which leads to adaptation and

adjustment towards socio economic and wetland management system. The absence of mechanisms for monitoring and evaluation of the efficiency and effectiveness of wetland management interventions hinders adaptive management (CANARI, 2006).

The area land committee chairperson Mr Maseige Farouq personal communication revealed that, apart from instructions received from the secretary to District Land board not to lease wetlands they have never been sensitized on wetland management under land management. In most of the sensitization meetings attended to wetlands are not give special consideration. They appear under environmental degradation as a component and facilitators do emphases that wetlands are being destroyed hence they recommend for preservation of wetlands but don't provide preservation methods to the community.

5.2.4 Population and Poverty (intervening variable)

The results indicated that the dependent variable, conservation and sustainability was influenced by population and poverty by sixty one percent (58.6%) taking into account all the variables there in and the remaining 41.1% by other factors. The respondents interviewed said that it was due to population influx and poverty that the natives had resorted to selling the plots in the middle of the business centre and decided to embark on wetland cultivation for rice growing in order to earn a living.

The respondents said that there is a population influx because of improved water supply, roads and security. This has resulted into the residents selling their plots to the in migrants who have embarked on construction and establishing competitive business which have resulted into decline in retail business which was previously being practiced by the natives hence resorting to

cultivation of rice in the wetlands. Members accept that they have witnessed changes in the status of wetlands for example they did state that wetlands are drying up very quickly and to them this was attributed to many people getting involved in wetland farming.

5.2.5 Comparing and ranking the relationship of the independent variables on, the dependant variable.

In this study, the researcher compared and ranked the independent variables (funding, stakeholder participation, monitoring and evaluation) in relation to their order of strength with the dependant variable(conservation and sustainability).

Results indicated that, there was a strong relationship between Stakeholder participation and conservation and sustainability since its dimensions community participation with $\beta=0.030$ at $\text{sig}=0.868$ and technical personnel support with $\beta=0.368$ at $\text{sig}=0.016$ had positive relationships that supported the hypotheses.

Monitoring and evaluation was ranked second because it had only one dimension with a positive relationship that supported the hypotheses with $\beta=0.640$ at 0.000 level of significance while the other two dimensions implementation progress with $\beta=-0.079$ at $\text{sig}=0.689$ and wetland restoration with $\beta=-0.027$ at $\text{sig}=0.822$ did not support the hypotheses and had negative relationships.

Funding was ranked third since it had no relationship with wetland management policy implementation because its dimensions had negative relationships and did not support the hypotheses.

5.3 Conclusion

It's evident that funding has no strong relationship with wetland conservation and sustainability as one of the variables used in this research. Without addressing this problem wetland management policy implementation will be of no success. Funding under policy implementation facilitate the establishment of a policy through the provision of allowances to the policy designers, procurement of the necessary materials, sensitization of stakeholders, establishment of wetland demonstration projects and enforcement of wetland laws guidelines and regulation.

Stakeholder participation as one of the major components in policy implementation has a strong relationship with conservation and sustainability. Policy implementation cannot be seen as an activity to be planned and carried out on a predetermined plan. Research indicates that it's a process which can only be managed through lessons learnt as one proceeds from one stage to another. So for more effective outcome there is need to derive strategic measures to address problems which hinder this variable.

In investigating the empirical relationship between monitoring and evaluation and wetland conservation and sustainability there is a strong bond. Research has indicated that policy implementation is a transitional process which need constant monitoring and evaluation at every stage to detect or identifying challenges and making the necessary adjustments for successful policy implementation.

Stakeholder participation was ranked highest since all its dimensions had positive relationships with wetland management policy implementation. Monitoring and evaluation was ranked second

since only one of its dimensions had a positive relationship with wetland management policy implementation and Funding was the third because all its dimensions had negative relationship with wetland management policy implementation.

The three central variables and the intervening variable are inter connected and they act together, any change in one of the variable may create changes in the other remaining variable either opportunities or challenges towards policy implementation. Population and poverty has an adverse effect on wetland conservation and sustainability. As need arise to address wetland management policy implantation challenges, there is equally need to address the issue of increasing urban population and urban poverty concurrently.

5.4 Recommendations

5.4.1 Funding

Government should adopt the Chinese compensation policy were members can be given funds comparable to what they would earn for working in the wetlands to avoid further wetland distraction.

5.4.2 Stakeholder Participation

There is need to improve on the human resource structure in lower Local Governments and to impart a sense of commitment to all the implementing agencies and community at large for successful wetland policy implementation by improving on the motivation in form of refresher courses and provide all the necessary allowances.

There is need to improve on the wetland encroachment law enforcement by drawing a clear definition for small wetlands because the current policy and laws do not define small wetlands shores and boundaries. The duty was left to Local Governments to pass relevant bye-laws and ordinance and Namutumba Town Council and district have not formulated any bye-law or regulation regarding wetlands.

Government should revive wetland community initiatives in every lower Local Government apart from the lower Local Environment Committee by revising the implementation structures.

Government should embark on massive face to face sensitization of the communities about wetland management by strengthening the implementation policies at lower local Governments and equipping the technical personnel, village committees, Non government organizations and civil society organisations with skills for implementing the policy.

There is need to bridge the communication gap between the line ministry and other Ministries, departments and sectors in both public and private institutions in order to harmonize the implementation process for wetland management policy.

5.4.3 Monitoring and Evaluation

Central Government should equip technical persons with the necessary knowledge and skills in policy implementation management and monitoring tools. This will enable technical persons to carry out regular monitoring which will help to evaluate the performance of the policy and in identifying challenges hence creating a basis for making the necessary adjustments for

successful policy implementation. Policy designers should produce guidelines in local languages such that community can be able to read, interpret and understand the objectives of the wetland policy. This will enable local leaders to monitor and report any wetland management concerns to relevant authorities like Local Environment Committees, District Environment Officer or NEMA.

5.5 Limitations to the study

Transport was expensive from my place of work to Uganda management institute to meet my supervisor for guidance.

- Questionnaires from NEMA officials were returned late hence slowing the coding and data entry process.
- The changing weather, much sun and high rains made some of my work hard like when carrying out the interviews.
- Financial constraints hindered the completion of research in time.
- Some respondents were very rude because they thought Government was collecting information so that they get eliminated from the wetlands.
- Frequent load shedding made stationary services expensive in terms of typing, photocopying, printing and binding
- It was difficult to translate some information from Lusoga to English to make meaningful deductions.

5.6 Further areas of study

Future researchers should look at other challenges facing wetland management policy implementation other than those addressed by this study.

Researchers should also look at Local Government wetland management strategies.

REFERENCES

Achankeng, E., (2003), *Globalization, Urbanization and municipal solid waste management*.
www.urbancity.org Retrieved 26- May-2009.

Mugenyi A., (2007), *An overview of Environmental Management paper presented to Uganda Management Institute students for urban governance and management 2007/2008*.

Alison et al: *Management of Wetlands* (2004). www.springerlink.com Retrieved 15th Nov 2009.

Adeke A., (2007), *Budget Reforms and Quality Service Delivered in local governments of Uganda: A case study of Entebbe District* Sept.

Babbie E.C., (2000), *The practice of social research*. University of Wadsworth Cengage Learning.

Bailey J. S., (1999), *Local Government Economics Principle and Practice* Published by; Macmillan Press Ltd. London U.K.

Benjamin J. R., (1996) *Scales of Environmental management* (Wetlands Conservation in Kenya and Uganda), Reproduced from the African Journal of International and Comparative Law. www.googlebooks.com Retrieved 26th May, 2009.

Brouwer R. (et al, 2003) *Integrated assessment and sustainable water and wetland management*. A review of concepts and management.

Caribbean Natural Resource Institute (CANARI): (2006) *CANARI Policy brief No. 9 participatory wetlands management in Caribbean* www.canari.org Retrieved on 4th November 2009.

Rwabuhoro F. K., Chief Administrative Officer Namutumba District: (2006) State of Environment in Namutumba District Paper Present to NEMA (26th June, 2006).

Colin Kirk P. & Norman Lee: (1997) *Suitable Development in a Developing World Integrative Socio-Economic Appraisal and Environmental Assessment* Edward Elgar Publishing Limited Cheltenham U.K.

FAOS: *SD Dimensions for Environment: Policy and Management* www.Fao.orgs/depdirect. Retrieved 26- May-2009.

Government of Uganda: (1995) *Constitution of the Republic of Uganda 1995*.

Government of Uganda: (2000) *Local government Act Cap 243 Laws of Uganda 2000.*

Government of Uganda: (1995) *National Policy for the Conservation and Management of Wetland Resources 1995.* Ministry of Natural Resources.

Government of Uganda: (2000) *The National Environment Act Cap 153 NEMA Laws of Uganda 2000.*

Government of Uganda: (1994) *The National Environment Management Policy for Uganda* by National Environment.

Ian Thomas: *Environmental policy: Australian practice in context of theory*, Retrieved on 27th /Sep/2009 www.googlebooks.com

International Water Management Institute: Annual Report 2005/06. Retrieved on 29th March, 2009 www.cgiar.org

Jim Cantrell (DFID, EC, UNDP and World Bank): *Linking Poverty Reduction and world and Environmental Management* (Policy challenges and opportunities) Published by International Bank for Reconstruction and Development/World Bank Washington, DC July 2002.

Jenkins, W. I., (1978) Policy Analysis: A Political and Organizational Perspective. London:

Martin Robertson. www.benaston.com/.../Policy/Models Retrived 04/January/2011

Kafuuma J. & Bekunda Catherine; (2009) *New vision* Vol. 24 No. 151 3rd July.

Mafabi P., (2005) *From conversion to conservation Fifteen years of managing wetlands for People and Environment in Uganda*. Published Wetland Inspection Division Ministry of Water and Environment.

Martine E. Amin: (2000) *Social Science Research (Conception, Methodology and Analysis)* published by Makerere University, Uganda.

Ministry of Water, land and Environment, (1994). *Wetland Action Plan Secretariat Uganda* (January).

MoWL&E: (2001) *Wetland Sector Strategic Plan 2001-2010*, January 2001.

Mugenda and Mugenda, (1999) *Research Methods (Quantitative and Qualitative Approaches)* published in Kenya by Acts press Nairobi.

Mugenyi K. M., (2001) *Effectiveness of the legal and Institutional Mechanism for Sustainable management of the environment under a decentralized system in Uganda* December.

NEMA: (1998) *Caring for our Environment; A hand book for local leaders*) ©NEMA and FES
Industrial Graphic Systems Ltd Kampala Uganda.

NEMA: *Management of Water and Environment* <http://www.nemaug.org> Retrieved 26- May-2009

NEMA: (2004) *State of the Environment Report for Uganda 2004*(NEMA, UNEP)

NEMA: (2005) *State of the Environment Report for Uganda 2004*(NEMA, UNEP 2004/)

NEMA: (2000) *Wetlands and the Law (legislation governing the ownership, Use and access to Wetlands 2000 Kampala Uganda)* NEMA.

NEMA: *The National Environment Act 2000 (Wetland, River banks and lake shores management)*.

Peter A. W., (1999) *Democracy and environment (Congruencies and Contradictions in South Africa)*.

Peter Saundry : (2007) *Improving responses through inter linkages in Africa's Policy*.

Encyclopedia of Earth www.ecoearth.org 26th March -2009.

Prof. Petrus A. B., (2005) *policy implementation: lessons for service delivery*, (School of Public Management and Administration), University of Pretoria. <http://unpan1.un.org>
Retrieved 28th November, 2010.

Juo & Huo : *Policy Implementation, Bureaucratic Accountability and Local Governance*.

The case of the Grain for Green protect in China www.allacademic.com retrieved 4th July 2009.

Randel Michael: (2002) *Planning monitoring and Evaluation Olive publications South Africa*
March 2002.

Reports: (2009) Environmental byelaw formulation www.nemaug.org 29th March/2009.

Richard Pink: (2010) Sample versus Census <http://survey.cvent.com/blog/conducting-online-surveys/sample-versus-census>. Retrieve 04/January/2011

Roberts.D. V., (2006) The GEF: Monitoring and Evaluation Policy. www.thegef.org retrieved 07-September-2009.

Rose Korugyendo: (2008) *Factors influencing effectiveness of the monitoring system for malaria control programme in Uganda*. A case study of Hoima District.

Talhok S. N., (2005) Global Environmental Facility, Monitoring and Evaluation policy
Retrieved 29th July, 2009 www.aswn.org/calender/wetland (2008).

Sustainable Wetland Management in South Africa www.cgair.org. Retrieved 29th March-2009.

Uganda Bureau of Statistics (UBOS): (2008) *National population policy for social Transformation and sustainable Development* (Ministry of finance playing and Economic Development).

United Nations Development Program (UNDP): (2008) *Improving access to land and tenure security policy* (December) www.ifad.org/pub/policy Retrieved on 27th July, 2009.

(UNDP & UN): (2005) *Uganda Human Development Report (linking Environment to Development: (A Deliberate Choice)* Published by United Nations.

Urbanization Process-Environmental and Health effects in Africa www.urbanicityorg.

United States Environmental Protection Agency (US, EPA) 1992. *Restoring and Creation of Wetlands* (a planning guide for central states, region in Iowa, Kansas, Missouri and Nebraska) September.

Wassaw W., *Analyzing the Challenges of quality in procurement of Goods in UNICEF Uganda* 2007

Wetland action: (2008) Striking A Balance (policy briefly notes www.wetlandaction.org.

Retrieved 26th –March-2009.

Wetland inspection division: (2001). *Wetland Sector Strategic plan 2001-2010* (Ministry of Water Lands and Environment, Uganda), January.

In the tables below, please tick in the box for the alternative that suits your attitudes.

Scale	1	2	3	4	5
	strongly disagree	Disagree	Neutral	Agree	Strongly agree

1. CONTRIBUTION OF FUNDING TOWARDS WETLAND MANAGEMENT POLICY IMPLEMENTATION

	(i) Central Government Release	1	2	3	4	5
1	Government send funds for sensitizing communities on wetland management					
2	Government releases wetland management funds on time					
3	The percentage released for wetlands management is enough to facilitate all planed activities in a financial year.					
4	Released funds are spent on training the communities in wetland management					
5	Central Government transfers help the technical persons in facilitating the implementation of wetland management actions plans					
	(ii) Local revenue.					
6	Local Governments allocate a big percentage of local revenue on wetlands management activities.					
7	Local Government get revenue from wetland use					
8	Local wetland management Committees are facilitated using locally generated revenue					
9	Local revenue helps the technical persons in facilitating the implementation of wetland management plans					
10	Locally generated revenue from wetlands is used to co-fund grants from central Government					
	(iii) Donor funding.					
11	Local Governments are linked to donor communities for wetland management funding					
12	Donor funds are used to facilitate wetland conservation and management					
13	Donors send funds for implementing wetland management policy					
14	Donor Community finance wetland restoration programmes					
	2. CONTRIBUTION OF THE STAKEHOLDERS PARTICIPATION IN					

WETLAND MANAGEMENT POLICY IMPLEMENTATIONS						
	(i) Community Participation	1	2	3	4	5
15	Community benefit from the wetlands?					
16	Community is involved in wetland management policy implementation					
17	Community understands the values of wetlands					
18	Community has established Local wetland management committee?					
19	Local wetland management committee is fully functional?					
20	Local Government Facilitates wetland management committees?					
21	Community understands wetland conservation management policies, laws and regulations					
22	Community is aware of the number of wetlands surrounding them and apply wise use					
23	Community practice wetland-friendly activities?					
24	There is a community wetland management plan in place					
	(ii) Technical personnel support.					
25	Technical persons often inducted wetland management committee on wetland related issues?					
26	Technical persons have a clear mode of communication during mobilization of wetland users?					
27	All offices are equipped with the necessary wetland management policy document.					
28	Law enforcement officers often approach the community on wetland management policy issues?					
29	There is sufficient technical man power to implement wetland management policies.					
30	Wetland Management policy issues are always considered during the planning period					
3. CONTRIBUTION OF MONITORING AND EVALUATION TOWARDS WETLAND MANAGEMENT POLICY IMPLEMENTATION						
	(i) Implementation Progress	1	2	3	4	5
31	There is compliance monitoring of wetlands					
32	Wetland management implementation Action plan is available					
33	Many wetland users have acquired wetland user permits					

34	Wetland user committees are in place					
35	Schedule for Training wetland users is in place					
	(ii) Restoration					
36	Is there any wetland restoration program					
37	Restoration orders are available					
38	Improvement notices have been issued					
39	Restoration plans are in place					
40	Restoration reports are in place					
41	A large percentage of degraded wetland have been restored					
	(iii) Community policy adoption.					
42	There is maximum awareness of wetland management policy by community.					
43	There is a high level of policy appreciation by community.					
44	Adherence to policy provisions by community.					
45	Community based wetland committee are in Existence.					
46	Community based wetland management plan are in place.					
47	Community wetland zonation or Demarcation.					

SECTION THREE: WETLAND MANAGEMENT POLICY IMPLEMENTATION

In the tables below, please tick in the box for the alternative that suits your attitudes.

Scale	1	2	3	4	5
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	(i) Conservation and sustainability				
	1	2	3	4	5
48	Local Government have enough technical manpower to implement the wetland management policies				
49	The communities are aware about the existence of wetland management policies				
50	Local governments have ably managed to conserve and sustain all wetlands within their areas of jurisdiction.				
51	More emphasis is placed on long term wetland management plans for conservation and sustainability.				

52	There are several wetland conservation measures put in place by local government.					
53	These measures are backed by wetland management byelaws and ordinances					
54	Communities have strongly contributed towards wetland conservation.					
55	Communities have exhibited compliance towards wetland management laws and regulations.					
	(i) population and poverty					
56	There is population influx due to urban migration.					
57	Increasing urban migration has led to human settlement in wetlands					
58	There are high rates of urban unemployment.					
59	Urban unemployment has increased poverty					
60	Higher rates of illiteracy has led to severe poverty					

Thank you for filling in this questionnaire

INTERVIEW GUIDE FOR OPINION LEADERS, AREA LAND COMMITTEE MEMBERS, VILLAGE CHAIRPERSON AND SECRETARIES FOR PRODUCTION AND ENVIRONMENT, MEMBERS INVOLVED IN WETLAND FARMING, LOCAL ENVIRONMENT COMMITTEES AND COMMUNITY MONITORING AND EVALUATION TEAM.

- (1) In what ways has funding contributed to the implementation of wetland management policy in Namutumba Town Council.
- (2) Do you receive any funds for wetland management policy implementation?
- (3) Do wetland users pay anywhere for using the wetlands.
- (4) What ways has the participation of the stakeholders affected wetland management policy implementation in Namutumba Town Council. Community members, NGOs and CSOs.
- (5) The stakeholders are not at all concerned about the sustainability of wetlands.
- (6) Technical officers have appreciated the policy for better dissemination, facilitate the formation Wetland management committees.
- (7) Technical officers have translated relevant information to the community, regularly supervise wetland user and regulate usage by issuing permits.
- (8) In what ways has monitoring and evaluation contributed to the implementation of the wetland management Policy.
- (9) The effectiveness of the policy are generally reflected upon implementation and during monitoring and evaluation.
- (10) Population increase and poverty have affected the existence of wetlands.

Appendix iii

CHECK LIST

This check list will be used to find out data on the following;

1. Wetland vegetation whether its dominant, occasional or none
2. Availability of water whether seasonal or permanent
3. Speed of water, stagnant or flowing
4. Color of water clear (transparency of water) and whether the soils are dark or sandy
5. Procedure for regulated activities such as cultivation of paddy should take a quarter of the wetland area is being applied.
6. Type of farming activities being applied in terms of trenches and drainage
7. Use of Agro chemicals and fertilizers
8. Wetland zonation and rate of wetland restoration.

Appendix (iv)

RELIABILITY ANALYSIS FOR FUNDING - SCALE (ALPHA)

N of Cases = 47.0

Statistics for	Mean	Variance	Std Dev	N of Variables		
				Range	Max/Min	Variance
Scale	36.1915	90.9843	9.5386	14		
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	2.5851	1.8085	3.0851	1.2766	1.7059	.1774
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	1.1666	.7567	1.5920	.8353	2.1039	.0599
Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.4102	-.0296	1.1873	1.2169	-40.1094	.0546
Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3483	-.0270	.8184	.8455	-30.2840	.0302

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
Q1.1.1	33.2553	75.0204	.6712	.7488	.8697
Q1.1.2	33.9149	78.6448	.5721	.6060	.8749
Q1.1.3	34.3830	80.5023	.5335	.5583	.8768
Q1.1.4	33.7660	77.5310	.6072	.7083	.8732
Q1.1.5	33.1064	81.4884	.3988	.4219	.8834
Q1.2.6	34.2553	81.5856	.5499	.6310	.8765
Q1.2.7	33.8085	80.5060	.4836	.4421	.8791
Q1.2.8	33.8511	84.6078	.3081	.4290	.8860
Q1.2.9	33.1702	83.2747	.4085	.4538	.8819
Q1.2.10	33.8298	78.4921	.5595	.7167	.8756
Q1.3.11	33.3191	73.8307	.7177	.7538	.8670
Q1.3.12	33.2553	76.3682	.6616	.8027	.8704
Q1.3.13	33.1489	77.4773	.6619	.8434	.8707
Q1.3.14	33.4255	78.8150	.6257	.7719	.8727

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Reliability Coefficients 14 items

Alpha = .8836 Standardized item alpha = .8821

Appendix (v)

RELIABILITY ANALYSIS FOR STAKEHOLDER PARTICIPATION - SCALE (ALPHA)

N of Cases = 53.0

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	2.7571	2.1698	4.3585	2.1887	2.0087	.3138
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	1.1207	.6190	1.5218	.9028	2.4584	.0460
Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3541	-.3730	.7841	1.1571	-2.1021	.0592
Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3045	-.3902	.6363	1.0265	-1.6305	.0504

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
Q1.3.15	39.7547	106.8041	-.2775	.4675	.8978
Q2.1.16	40.9245	92.6096	.4612	.4382	.8765
Q2.1.17	40.9811	89.2881	.5798	.5129	.8715
Q2.1.18	41.5849	89.4013	.6527	.6555	.8688
Q2.1.19	41.9057	90.1255	.6447	.6591	.8694
Q2.1.20	41.7736	90.5631	.5713	.5890	.8720
Q2.1.21	41.9434	85.9006	.7853	.6848	.8625
Q2.1.22	41.5660	93.0965	.3483	.6219	.8826
Q2.1.23	41.9057	87.3948	.6842	.6650	.8668
Q2.1.24	41.6981	88.9071	.6546	.6499	.8685
Q2.2.25	40.9434	93.6313	.4305	.4000	.8776
Q2.2.26	40.9434	93.1698	.4556	.5062	.8766
Q2.2.27	41.5472	89.9064	.6400	.6055	.8694
Q2.2.28	41.4151	88.9782	.6234	.5978	.8697
Q2.2.29	41.6226	87.8164	.6152	.6207	.8698
Q2.2.30	41.1887	91.0791	.4747	.3989	.8763

Reliability Coefficients 16 items

Alpha = .8808 Standardized item alpha = .8751

Appendix vi

RELIABILITY ANALYSIS FOR MONITORING AND EVALUATION - SCALE (ALPHA)

N of Cases = 53.0

Statistics for	Mean	Variance	Std Dev	Variables		
Scale	63.0377	318.7293	17.8530	25		
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	2.5215	1.9434	3.2830	1.3396	1.6893	.1198
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	1.8033	.6727	18.7068	18.0341	27.8080	12.4328
Inter-item						
Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.4561	-.7899	1.0845	1.8745	-1.3730	.0456
Inter-item						
Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3906	-.1539	.8501	1.0040	-5.5230	.0274

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
Q3.1.31	60.2830	293.9761	.6193	.8345	.8878
Q3.1.32	60.1698	297.4898	.5863	.5753	.8889
Q3.1.33	61.0943	297.5486	.6854	.6821	.8880
Q3.1.34	60.6604	295.2671	.6249	.7080	.8880
Q3.1.35	60.6415	299.4267	.5485	.6636	.8896
Q3.2.36	59.7547	273.0733	.1885	.4626	.9427
Q3.2.37	60.2642	293.4673	.6594	.8847	.8872
Q3.2.38	60.2075	290.8599	.6953	.8916	.8863
Q3.2.39	60.2642	286.7750	.7958	.9168	.8841
Q3.2.40	60.3396	294.1132	.6539	.7570	.8874
Q3.2.41	60.9057	291.1640	.7333	.8258	.8859
Q3.3.42	60.7547	292.2271	.6982	.8984	.8865
Q3.3.43	60.8491	293.5152	.6781	.8324	.8870
Q3.3.44	60.8868	294.3716	.7046	.7843	.8870
Q3.3.45	60.5472	296.8679	.6530	.7213	.8881
Q3.3.46	60.5472	292.3679	.7177	.7508	.8864
Q3.3.47	60.4717	295.1771	.5614	.7009	.8888
Q4B.1.48	60.5660	301.2119	.3911	.6249	.8922
Q4B.1.49	60.5660	297.5965	.5145	.6903	.8898
Q4B.1.50	61.0189	300.0958	.6320	.7488	.8891
Q4B.1.51	59.9245	303.3788	.3485	.6573	.8930
Q4B.1.52	60.1321	301.3861	.4491	.8557	.8912
Q4B.1.53	60.3396	302.5363	.3907	.8392	.8922
Q4B.1.54	60.7736	297.1016	.5965	.8481	.8887
Q4B.1.55	60.9434	294.8621	.6362	.7998	.8878

Reliability Coefficients 25 items

Alpha = .8943 Standardized item alpha = .9413

Appendix vii

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.478 ^a	.228	.187	.64006	.228	5.516	3	56	.002
2	.667 ^b	.445	.394	.55258	.217	10.568	2	54	.000
3	.759 ^c	.577	.510	.49672	.131	5.277	3	51	.003
4	.766 ^d	.586	.512	.49604	.009	1.138	1	50	.291

a. Predictors: (Constant), Donor Funding, Local Revenue, Central Government Release

b. Predictors: (Constant), Donor Funding, Local Revenue, Central Government Release, Technical personnel support, Community Participation

c. Predictors: (Constant), Donor Funding, Local Revenue, Central Government Release, Technical personnel support, Community Participation, Restoration, Community Policy Adoption, Implementation Progress

d. Predictors: (Constant), Donor Funding, Local Revenue, Central Government Release, Technical personnel support, Community Participation, Restoration, Community Policy Adoption, Implementation Progress, Population And Poverty

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.498 ^a	.248	.193	.63766	.248	4.524	4	55	.003

a. Predictors: (Constant), Population And Poverty, Donor Funding, Local Revenue, Central Government Release

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.677 ^a	.458	.429	.53638	.458	15.769	3	56	.000

a. Predictors: (Constant), Technical personnel support, Population And Poverty, Community Participation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.712 ^a	.506	.470	.51649	.506	14.104	4	55	.000

a. Predictors: (Constant), Community Policy Adoption, Population And Poverty, Restoration, Implementation Progress

APPENDIX VIII

DESCRIPTIVE STATISTICS

Descriptive Statistics for central government releases

	N	Minimum	Maximum	Mean	Std. Deviation
Government sends funds for sensitizing communities on wetland management	60	1	5	3.02	1.200
Government releases wetland management funds on time	60	1	5	2.17	1.076
Percentage released for land management is enough to facilitate all planned activities in a financial year	60	1	5	1.87	1.049
Released funds are spent on training the communities in wetland management	56	1	5	2.50	1.176
Central Government transfer help of technical persons to facilitate implementation of wetland management action plans	60	1	5	3.10	1.130
Valid N (listwise)	56				

Source: primary data

Descriptive Statistics for local revenue mobilization

	N	Minimum	Maximum	Mean	Std. Deviation
local Government allocate a big percentage of local revenue on wetlands management activities	60	1	5	1.97	.974
Local Government get revenue from wetland use	57	1	4	2.39	1.065
local wetland management committees are facilitated using locally generated revenue	58	1	4	2.24	.942
local revenue helps technical persons facilitate implementation of wetland management plans	60	1	4	2.92	.944
locally generated revenue from wetlands is used to co-fund grants froms central Government	59	1	5	2.36	1.171
Valid N (listwise)	54				

Source: primary data

Descriptive Statistics for donor funding

	N	Minimum	Maximum	Mean	Std. Deviation
local governments are linked to donor communities for wetland management funding	59	1	5	2.81	1.266
Donor funds are used to facilitate wetland conservation and management	59	1	5	2.92	1.103
Donors send funds for implementing wetland management policy	60	1	5	3.00	1.105
Donor community finance wetland restoration programmes	58	1	4	2.69	1.030
Valid N (listwise)	56				

Source: primary data

Descriptive Statistics for community participation

	N	Minimum	Maximum	Mean	Std. Deviation
community benefit from the wetlands?	60	1	5	4.33	.877
community is involved in wetland management policy implementation	58	1	5	3.21	1.022
community understands the values of wetlands	60	1	5	3.18	1.112
community has established local wetland management committees	59	1	5	2.54	1.023
local wetland management committee is fully functional	60	1	4	2.18	.965
Local Government facilitates wetland management committees	60	1	5	2.32	1.033
Community understands wetland conservation management policies, laws and regulations	58	1	5	2.14	1.067
Community is aware of the number of wetlands surrounding them and apply wise use	59	1	5	2.59	1.205
Community practice wetland-friendly activities	59	1	5	2.29	1.145
Community wetland management plan in place	60	1	5	2.48	1.081
Valid N (listwise)	55				

Source: primary data

Descriptive Statistics for technical personnel support

	N	Minimum	Maximum	Mean	Std. Deviation
Technical persons often inducted wetland management committee on wetland related issues	60	1	5	3.18	1.033
Technical persons have a clear mode of communication during mobilization of wetland users	60	1	5	3.23	1.015
All offices are equipped with the necessary wetland management policy document	60	1	5	2.62	1.010
Law enforcement officers often approach the community on wetland management policy issues	59	1	5	2.73	1.127
Sufficient technical manpower to implement wetland management policies	59	1	5	2.58	1.235
Wetland management policy issues are always considered during the planning period	57	1	5	3.00	1.165
Valid N (listwise)	57				

Source: Primary data

Descriptive Statistics for implementation progress

	N	Minimum	Maximum	Mean	Std. Deviation
Technical persons often inducted wetland management committee on wetland related issues	60	1	5	3.18	1.033
Technical persons have a clear mode of communication during mobilization of wetland users	60	1	5	3.23	1.015
All offices are equipped with the necessary wetland management policy document	60	1	5	2.62	1.010
Law enforcement officers often approach the community on wetland management policy issues	59	1	5	2.73	1.127
Sufficient technical manpower to implement wetland management policies	59	1	5	2.58	1.235
Wetland management policy issues are always considered during the planning period	57	1	5	3.00	1.165
Valid N (listwise)	57				

Source: Primary data

Descriptive Statistics for restoration

	N	Minimum	Maximum	Mean	Std. Deviation
Any wetland restoration program	60	1	33	3.37	4.071
Restoration orders available	60	1	5	2.88	1.121
Improvement notices issued	60	1	5	2.90	1.130
Restoration plans in place	60	1	5	2.87	1.127
Restoration reports in place	60	1	5	2.77	1.064
Large percentage of degraded wetland restored	59	1	5	2.14	1.025
Valid N (listwise)	59				

Source: primary data

Descriptive Statistics for community policy adoption

	N	Minimum	Maximum	Mean	Std. Deviation
Maximum awareness of wetland management management policy by community	60	1	4	2.33	1.084
High level of policy appreciation by community	60	1	4	2.18	1.000
Adherence to policy provisions by community	60	1	5	2.17	.960
Community based wetland committee do exist	60	1	4	2.48	.930
Community based wetland management plan are in place	59	1	5	2.49	1.057
Community has demarcated wetlands	59	1	5	2.54	1.134
Valid N (listwise)	58				

Source: primary data

Descriptive Statistics for Conservation and Sustainability

	N	Minimum	Maximum	Mean	Std. Deviation
Local Government have enough technical manpower to implement the wetland management policies	60	1	5	2.58	1.239
Communities are aware about the existence of wetland management policies	60	1	5	2.62	1.136
Local Government have ably managed to conserve and sustain all wetlands in areas of jurisdiction	60	1	4	2.08	.869
More emphasis place on long term wetland management plans for conservation and sustainability	59	1	5	3.14	1.152
Several wetland conservation measures put in place by local government	60	1	5	2.90	1.085
These measures are backed by wetland management byelaws and ordinances	58	1	5	2.69	1.111
Communities strongly contributed towards wetland conservation	59	1	4	2.29	1.001
Communities exhibited compliance towards wetlands management laws and regulations	59	1	5	2.17	1.101
Valid N (listwise)	56				

Source: Primary data

APPEDENIX IX

THE INFLUENCE OF THE INTERVENING VARIABLE ON THE INDEPENDENT AND DEPENDENT VARIABLE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.420	.341		4.169	.000
	Central Government Release	-.009	.129	.010	.069	.945
	Local Revenue	.466	.133	.470	3.516	.001
	Donor Funding	.006	.100	.009	.061	.951
2	(Constant)	.585	.352		1.663	.102
	Central Government Release	-.075	.113	-.083	-.658	.513
	Local Revenue	.188	.131	.190	1.443	.155
	Donor Funding	-.023	.086	-.033	-.268	.790
	Community Participation	.268	.176	.241	1.522	.134
	Technical personel support	.366	.149	.383	2.458	.017
3	(Constant)	.820	.334		2.452	.018
	Central Government Release	-.058	.107	-.065	-.545	.588
	Local Revenue	-.073	.136	-.074	-.539	.592
	Donor Funding	-.055	.079	-.078	-.701	.486
	Community Participation	.034	.202	.030	.167	.868
	Technical personel support	.352	.141	.368	2.488	.016
	Implementation Progress	-.077	.191	-.079	-.403	.689
	Restoration	-.017	.074	-.027	-.226	.822
Community Policy Adoption	.573	.145	.640	3.959	.000	
4	(Constant)	1.343	.593		2.264	.028
	Central Government Release	-.090	.111	-.100	-.809	.423
	Local Revenue	-.085	.136	-.086	-.625	.535
	Donor Funding	-.037	.081	-.052	-.453	.652
	Community Participation	.054	.202	.049	.269	.789
	Technical personel support	.356	.141	.373	2.524	.015
	Implementation Progress	-.069	.191	-.071	-.362	.719
	Restoration	-.011	.075	-.017	-.144	.886
	Community Policy Adoption	.533	.149	.595	3.570	.001
	Population And Poverty	-.115	.108	-.107	-1.067	.291

a. Dependent Variable: Conservation And Sustainability