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Improving Land and Water Governance in Uganda: The Role of Institutions in Secure Land and Water Rights in Lake Victoria Basin

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Abstract

Land and water constitute the most important resources upon which majority of East Africa's population depend. Over 35 million people depend on land and water resources in Lake Victoria Basin (LVB). In order to promote sustainable utilization and management of LVB resources, the Lake Victoria Basin Commission (LVBC) was established by the East African Community (EAC) to promote, facilitate and coordinate activities of different actors through collaboration with formal and informal institutions in EAC Partner States.

Despite the establishment of LVBC as a specialized institution of the EAC, LVB faces complex challenges which have negative impacts on basin's ecosystem and region's economy and livelihoods. Hence, using a multifaceted research design comprising of both qualitative and quantitative methods, the study sought to examine the role of LVBC and other formal and informal institutions in promoting secure land and water rights in LVB. Furthermore, in order to obtain insights about the actual realities on ground, the study analyzed the status of land and water rights and its effects on livelihood in one of the major catchment areas (Wakiso district) of LVB and identified the challenges that impede effective land and water governance in Uganda.

The study findings show that the growing land and water challenges in LVB is not so much a crisis of resource availability but rather one of weak governance. Most land and water sector institutions are weak, fragmented, uncoordinated and grapple with corruption. Decision making is often top-down while there is no clear framework to promote meaningful stakeholder participation. Most institutions for land and water administration lack the desired capacity to perform efficiently and effectively as well as support the competent decision-making process. The general perception of the local people towards efforts of the government (GoU) in fighting corruption is very inefficient and ineffective. For instance, most local people cite the lack of transparency in the sale or lease of public land.

In order to address the existing problems, the study suggests a generalized model for improving land and water governance in EAC partner states and suggests the pre-requisites necessary to implement the model in Uganda.

Keywords: Land and water governance, institutions, land and water rights, Lake Victoria Basin, Uganda

Zusammenfassung

Boden und Wasser stellen die beiden wichtigsten Ressourcen für den Großteil der Bevölkerung Ost-Afrikas dar. Genauso im Lake Victoria Basin (LVB), wo über 35 Millionen Menschen von den Land- und Wasserressourcen abhängig sind. Für einen nachhaltigen Umgang mit den Ressourcen des LVBs gründete die East African Community (EAC) die LVB Commission (LVBC). . Deren Aufgaben sind es, die Aktivitäten verschiedener Akteure durch die Zusammenarbeit mit formellen und informellen Institutionen in den Staaten der EAC zu stärken, zu unterstützen und zu koordinieren.

Trotz der Gründung der LVBC als Fachorganisation der EAC sieht sich diese komplexen Herausforderungen gegenübergestellt, die negative Auswirkungen auf das Ökosystem, die regionale Wirtschaft und auf die Existenzgrundlage der Bevölkerung haben. Vor diesem Hintergrund besteht das Ziel der vorliegenden Arbeit darin, unter Anwendung qualitativer und quantitativer Forschungsmethoden die Rolle der LVBC und anderer formeller und informeller Institutionen zur Sicherung von Boden- und Wasserrechten im LVB zu untersuchen. Um einen Einblick in die aktuelle Situation vor Ort zu bekommen, analysierte die Arbeit den Status der Boden- und Wasserrechte und deren Auswirkungen auf die Existenzgrundlage der Bevölkerung in einem der bedeutendsten Einzugsgebiete des LVB, dem Wakiso Distrikt. Des Weiteren wurden Herausforderungen identifizieren, die einer effektiven Governance im Bereich Boden und Wasser in Uganda entgegenstehen. .

Die Ergebnisse zeigen, dass die zunehmenden Herausforderungen bezüglich Boden und Wasser im LVB weniger Ergebnis einer abnehmenden Verfügbarkeit von Ressourcen sind, als vielmehr Ergebnis einer schwachen Governance. Die meisten Institutionen im Bereich Boden und Wasser sind schwach, zersplittert, unkoordiniert und müssen sich mit Korruption auseinandersetzen. Die Entscheidungsfindung läuft häufig top-down, feste Rahmenbedingungen für die Förderung einer intensiven Teilnahme der betroffenen Akteure fehlen. Einem Großteil der Verwaltungseinrichtungen im Bereich Boden und Wasser fehlt es an den erforderlichen Fähigkeiten, um effizient und effektiv zu handeln sowie Entscheidungsprozesse kompetent zu unterstützen. Die betroffene Bevölkerung nimmt die Bemühungen der Regierung (GoU) zur Bekämpfung der Korruption als sehr ineffizient und ineffektiv wahr. Eines der am häufigsten genannten Beispiele ist die fehlende Transparenz beim Verkauf oder der Verpachtung öffentlichen Grund und Bodens.

Zur Bewältigung der genannten Probleme wird ein verallgemeinerbares Modell entwickelt, um die Governance der Ressourcen Boden und Wasser in den Staaten der EAC zu optimieren und deutet die Vorbedingungen an, die notwendig sind, das Modell in Uganda anzunehmen.

Schlüsselwörter: Boden und Wasser Governance, Institutionen, Boden und Wasserrechte, Lake Victoria Basin, Uganda

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List of Acronyms

ACF:	Action against Hunger “ <i>Action Contre la Faim</i> ”
ACORD:	Agency for Cooperation and Research in Development
AfDB:	Africa Development Bank
ALC:	Area Land Committee
ASL:	Above Sea Level
BMUs:	Beach Management Units
CASSOA:	Civil Aviation Safety and Security Oversight Agency
CBO:	Community Based Organization
CIDI:	Community Integrated Development Initiatives
CoM:	Council of Ministers
DEA:	Directorate of Environmental Affairs
DfID:	Department for International Development, United Kingdom
DFR:	Department of Fisheries Resources
DLB:	District Land Board
DLO:	District Land Office
DSOER:	District State of Environment Report

DWD:	Directorate of Water Development
DWRM:	Directorate of Water Resources Management
EAC:	East African Community
EACJ:	East African Court of Justice
EADB:	East African Development Bank
EALA:	East African Legislative Assembly
EARC:	East African Royal Commission
ECOVIC:	East African Communities Organization for the Management of Lake Victoria Resources
EJAU:	Environmental Journalists Association of Uganda
ENR:	Environment and Natural Resources
FAO:	Food and Agriculture Organization of the United Nations
FBO:	Faith Based Organization (Religious)
FDIs:	Foreign Direct Investments
FY:	Financial Year
GGAP:	Good Governance Action Plan
GGWG:	Good Governance Working Group
GIZ:	Deutsche Gesellschaft für Internationale Zusammenarbeit
GLTN:	Global Land Tool Network
GoU:	Government of Uganda
HEWASA:	Health through Water and Sanitation
HIV/AIDS:	Human Immunodeficiency Virus /Acquired Immune Deficiency Syndrome
IFAD:	International Fund for Agricultural Development
IGG:	Inspector General of Government
IMF:	International Monetary Fund
IUCEA:	Inter-University Council for East Africa
IWRM:	Integrated Water Resource Management
LC:	Local Council
LGA:	Local Governments Act
Ltd:	Limited
LSSP:	Land Sector Strategic Plan
LVB:	Lake Victoria Basin
LVBC:	Lake Victoria Basin Commission
LVEMP II:	Lake Victoria Environment Management Project Phase II
LVFO:	Lake Victoria Fisheries Organization
MAAIF:	Ministry of Agriculture Animal Industry and Fisheries
MDGs:	Millennium Development Goals
MEMD:	Ministry of Energy and Mineral Development
MES:	Ministry of Education and Sports
MFPED:	Ministry of Finance, Planning and Economic Development
MGLSD:	Ministry of Gender, Labor and Social Development
MLG:	Ministry of Local Governments
MLHUD:	Ministry of Lands, Housing and Urban Development

MoH:	Ministry of Health
MTTI:	Ministry of Tourism, Trade and Industry
MWE:	Ministry of Water and Environment
NAPE:	National Association of Professional Environmentalists
NDP:	National Development Plan
NEMA:	National Environment Management Authority
NEMP:	National Environment Management Policy
NEPAD:	New Partnership for Africa's Development
NES:	National Environment Statute
NFA:	National Forest Authority
NFP:	National Focal Point office
NGO:	Non-Governmental Organizations
NORAD:	Norwegian Agency for Development Cooperation
NPCTs:	National Project Coordination Teams
NWDR:	National Water Development Report
NWSC:	National Water and Sewerage Corporation
ODI:	Overseas Development Institute
OECD:	Organization for Economic Co-operation and Development
PEAP:	Poverty Eradication Action Plan
PSP:	Private Sector Participation
RPCT:	Regional Project Coordination Team
RWH:	Rain Water Harvesting
Sida:	Swedish International Development Agency
SLM:	Sustainable Land Management
SPSS:	Statistical Package for Social Sciences
TI:	Transparency International
UCSD:	Uganda Coalition for Sustainable Development
UFPEA :	Uganda Fish Processors and Exporters' Association
UGX:	Uganda Shillings
ULC:	Uganda Land Commission
UNCED:	United Nations Conference on Environment and Development
UNDP:	United Nations Development Programme
UNEP:	United Nations Environment Programme
UNESCAP:	United Nations Economic & Social Commission for Asia & the Pacific
UNESC:	United Nations Economic and Social Council
UN-Habitat:	United Nations Human Settlements Programme
UPE:	Universal Primary Education
USAID:	United States Agency for International Development
USE:	Universal Secondary Education
US\$:	United States Dollar
UWASNET:	Uganda Water and Sanitation NGO Network
VAT:	Value Added Tax
WCED:	World Commission on Environment and Development

WESWG:	Water and Environment Sector Working Group
WMZs:	Water Management Zones
WSDF:	Water and Sanitation Development Facility
WSS:	Water Supply and Sanitation
WSSD:	World Summit on Sustainable Development
WSSWG:	Water and Sanitation Sector Working Group
WUAs:	Water Users Associations

Measurements and Equivalents

1 Hectare (ha)	2.471 Acres
1 Acres	4,050 Square meters (m ²)
1 Mile	1.609 Kilometer (km)
1 United States Dollar (US\$)	2,556.8 Uganda Shillings (UGX) ¹
1 Euro (EUR)	3,382.5 Uganda Shillings (UGX)

Uganda's Geographical Indicators

Latitude	4°12'N & 1°29'S
Longitude	29°34'E & 35°0'E
Altitude (Minimum ASL)	620 meters
(Maximum ASL)	5,110 meters
Total surface area	241,550.7 km ²
Area under land	199,807 km ²
Area under water and swamps	41,743 km ²
Temperature	16-31°C
Rainfall	700 -2000 mm/year

Uganda's Demographic and Socio-economic Indicators

Total population (2012 mid-year)	34.1 million
Urban Population (2012 mid-year)	14.7 %
Rural Population (2012 mid-year)	85.3 %
Sex ratio of total population (2002 census)	95 males per 100 females
Population density (2002 census)	123 persons /km ²
Infant Mortality rate (2002 census)	76 per 1000 live births
Life Expectancy at birth (2002 census)	50.4 years
Life Expectancy at birth (Male)	48.8 years
Life Expectancy at birth (Female)	52.0 years

¹ Exchange Rate, As at 31 August 2013 from OANDA Currency Converter www.oanda.com/currency/converter/

Glossary of Terms

Abalaalo:	Migrants from other parts of Uganda whose main economic activity is pastoralism
Absentee landlord:	People who own a lot of land but do not live on it and sometimes cannot easily be traced especially in Buganda Kingdom.
Bodaboda:	It's a form of public motorcycle taxi in Uganda
Bonafide occupant:	A person who before the coming into force of the 1995 Constitution had occupied and utilized or developed any land unchallenged by the registered owner or agent of the registered owner for twelve years or more or had been settled on land by the Government of Uganda or an agent of the government, which may include a local authority
Buganda Kingdom:	It's one of the biggest and oldest Kingdom founded in the 14 th century by the Bantu speaking people. The Kingdom is located within the Lake Victoria Basin in Uganda
Clan:	A group of people who trace their lineage to a common ancestor. There are 52 clans in Buganda Kingdom
District:	It's a type of administrative unit composed of several sub-counties managed under the Local Government system
Gross Domestic Product:	The total value of goods and services produced within the economic territory of the country.
Kabaka:	Title given to the King of Buganda
Kibanja holder:	Term used to describe a tenant especially on Mailo land in Buganda Kingdom.
Land Tenure:	Relationship whether legally or customarily defined, among people as individuals or groups, with respect to land and associated natural resources
Land Tenure Systems:	The manner in which property rights are to be allocated within societies.
Land Tenure Security:	The degree of confidence that land users will not be arbitrarily deprived of the rights they enjoy over land and the economic benefits that flow from it
Land and Water Governance:	A range of rules, processes, and structures about access, development and management of land and water resources and the manner in which the decisions are implemented and enforced and the way in which competing interests in land and water resources are managed at the different levels of the society.
Mailo Land Tenure:	Form of Freehold land tenure system introduced after the signing of the 1900 Buganda Agreement with the British. It has its measurements in Miles-locally translated as "Mailo" in Luganda language
Ramsar Site:	An area of wetlands of international importance recognized under the Ramsar Convention of 1971

Chapter One:

Revitalizing Land and Water Governance

“Good Governance is perhaps the single most important factor in eradicating poverty and promoting development”, Kofi Annan- Former UN Secretary-General

1.1 General Introduction

In many developing countries, governance of natural resources especially land and water is a major challenge. Good governance in land and water sector is by far the basis for sustainable development of many countries. The development of both land and water resources are central to the achievement of the Millennium Development Goals (MDGs), but water, and not land typically dominates the international debate (IFAD, 2004) whose main focus of attention is to halve by 2015 the proportion of the population without sustainable access to safe drinking water and basic sanitation (Goal 7) and eradicate extreme poverty and hunger (Goal 1). With barely a few years to reach the globally agreed MDGs target date of 2015, many developing countries are still very far from realizing the MDGs.

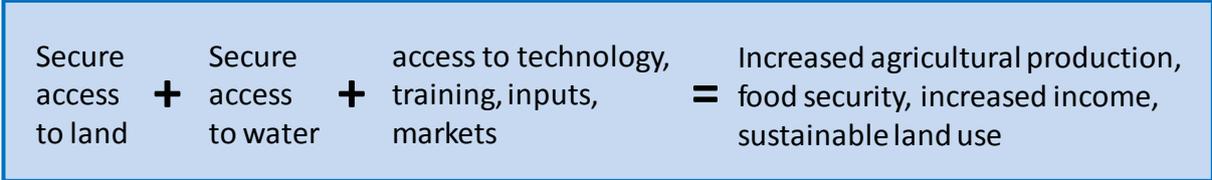
Among the major obstacles to attainment of the MDGs is weak governance. Weak governance in land and water sector leads to unequal access to land and water resources, insecurity of tenure, unsustainable land and water use, weak institutions for conflict resolution among others governance challenges (FAO, 2009a). Particularly land and water institutions in most developing countries are grappling with chronic corruption and poor service delivery in allocation of land and water resources and often exclude certain social groups especially the poor and indigenous minorities from equal access to land and water resources which are their only source of livelihood assets. Hodgson (2004) stressed that the principal mechanism for the allocation of land and water resources is the institution of legal rights: land tenure rights and water rights. The substance of such rights and the manner in which they are allocated have major implications for the use and management of land and water resources as well as for the social and economic development of states and their citizens, with particular impacts on the livelihoods of the poor.

During the World Summit on Sustainable Development (WSSD) in 2002, the Johannesburg Plan of Implementation equally stressed the significance of adopting policies and implementation of laws that guarantee well defined and enforceable land and water use rights and promotion of legal security of tenure in order to enhance sustainable livelihoods. Although integrating land and water governance is internationally being recognized as the most effective means of meeting the Millennium Goals, most international agencies instead have mainly focused on just improving water governance to solve the growing water crisis. To address the water crisis comprehensively means fully recognizing the significance of land and its influence on water governance - so the real issue is one of land and water governance and not just water Governance (IFAD, 2004).

1.2 Land and Water Crisis

With the current threats posed by climate change and the ever increasing population growth in developing countries, land and water issues have become top on political and scientific agenda. The increasing land and water conflicts, especially between land owners and users, public and private investors call for urgent governance solutions. Most international development agencies and water managers now agree that the growing water crisis is not so much a crisis of resource availability but one of governance (IFAD, 2004). Despite its obvious importance, the knowledge base on land and water governance is weak. A recent study undertaken by the International Fund for Agricultural Development (IFAD) examined several case studies in which the links between land and water governance were identified as a key to successful development (UNESCO, 2006). Out of the four case studies reviewed in Bangladesh, Peru, Sudan and Zimbabwe, IFAD synthesized that the growing water crisis can be addressed comprehensively only if the link between secure access to land and to water is recognized, and the related governance issues are understood.

Box 1: IFAD Synthesis Linking Land and Water Governance



Source: IFAD (2004)

According to Magel (2011) the interconnected nature of land and water conflicts can only be solved using the strength of a comprehensive (dynamic) participatory land management that brings both water and land issues together. Despite the growing call for integrated approaches, there is, in reality, limited practical experience of how it can be implemented. In the overall context of Integrated Water Resource Management (IWRM), relevant challenges to and opportunities for an improved integration of land and water governance have, surprisingly, received little attention. It has proven difficult to integrate or coordinate land and water in a meaningful way, particularly for the rural and urban poor who have been socially and politically marginalized, and largely excluded from access to land and water resources management and related services (UNESCO, 2006). A shift from integrated (land and water) resource management to land and water governance has proved more difficult for land and water sector institutions in most developing countries.

Magel and Gross (2010) argued that the demand goes far beyond international integrated management models, it is about the necessity of a combined **land and water governance** debate – governance which makes reference to land, water and property and use questions in a simultaneous and holistic manner. An effective institutional and legal framework is the foundation for achieving effective land and water governance. The legal and policy framework should clearly define land and water governance in the context of the country’s social, political and economic conditions. However, no agreed-upon definition of the term “*land and water governance*” currently exists. This study attempts to help fill this gap by defining land and water governance as: *a range*

of rules, processes, and structures about access, development and management of land and water resources; the manner in which these decisions are implemented and enforced; and the way in which competing interests in land and water resources are managed at the different levels of a society.

1.2.1 Land and Water Governance: Major Issues in East Africa

Land and water constitute the most important resources for which majority of East Africa's population depend either directly (in form of agriculture, forestry, fishing, housing and industrial production, etc.) and or indirectly (through services like tourism, trade, transport and communication, etc.). Land and water support a population of over 35 million people living in Lake Victoria Basin (LVB) that is shared among five East African Community States of which over 70% of the population depends on rain-fed subsistence agriculture (EAC, 2007). As the population rapidly soars and agricultural activities intensify in the lake basin, the increasing demand for scarce land and water resources is likely to spur a number of conflicts which may result in regional instability. The complex land and water governance challenges pose significant threats to East Africa's socio-economic and political development. Particularly, land and water governance problems in Lake Victoria Basin emanate from weak institutions and absence of a clear framework for stakeholder coordination. Institutions (whether formal or informal) play a vital dual role in facilitating the articulation of a country or region's development objectives and aspirations, and then in translating them into action. Thus whether it is for strategic thinking/visioning and long-term policy-making or for actual implementation or evaluation and control, the existence and capabilities of institutions for crystallizing and guiding collective efforts is the critical center, without which little can be achieved (UNESCO, 2004).

Similarly, lack of a harmonized regulatory framework for land and water governance among the five EAC Partner States² aggravates the problem of unsustainable land and water use in LVB. As a result, many policies and legislations are overlapping or even conflicting making coordination and implementation sometimes difficult (EAC, 2006a). National policies and legal frameworks in the Partner States are at variance and worse still, the planning process is often Top-Down while development actors including Civil Society Organizations (CSO) are at liberty to undertake any development intervention. Existing institutions legally mandated to sustainably manage the lake basin resources and effectively coordinate the activities of different stakeholders are weak, poorly financed and prone to political interference from the Partner States. Consequently, more than half of LVB population is in abject poverty with basically an income of less than US\$ 1 per day and thus heavily relies on subsistence agricultural production (EAC, 2006a). A big number of these socially and politically marginalized rural and urban poor are largely excluded from access to land, water resources management and related services (UNESCO, 2006).

² Partner States" mean the parties to the Treaty for the Establishment of the "East Africa Community namely, the Republic of Kenya, the Republic of Uganda and the United Republic of Tanzania (EAC, 2003). Rwanda and Burundi are new EAC Partner States

Effective land and water governance in LVB is further constrained by the complexity and uncoordinated structure of LVB institutions (such as LVBC, LVFO and the national focal point ministries in Partner States etc.). The uncoordinated nature of LVB institutions often results into duplication of activities and conflicting decision-making processes. Coupled by the bureaucratic institutional inertia, it has become even more difficult for marginalized rural and urban poor to access basic land and water related services. Corruption has deeply penetrated most land and water institutions rendering them inefficient and ineffective to deliver the equitable services that citizens require. Thus, the consequences of corruption are disproportionately borne by the poor, who lack resources to compete with those able and willing to pay bribes; in the end corruption 'tightens the shackles of poverty' on countries or groups that can least afford it (UNDP, 2004a). Corruption further widens the economic gap between the "haves" and "have not" as the property rights of the poor continue to be threaten by the rich.

Several studies done by Meinzen-Dick, (2009); Buch, (2007) confirm that the linkage between poverty and property rights is closely correlated. Poor people not only lack current income, but also assets with which to generate incomes (Meinzen-Dick, 2009). Therefore lack of secure access to land which is the most important household asset directly results to insecure access to water and hence accelerates household poverty. Persistent household poverty in many developing countries is attributed to inefficient property rights (Buch, 2007). Thus, poverty and inequality in the Lake Victoria Basin is exacerbated by the inability of some people [due to a variety of constraining processes] to access their full property rights and profitably transform these rights into goods and services (Orindi and Huggins, 2005). These constraining processes may not be fully recognized or articulated by governments; development agencies and local people themselves, and are not fully addressed by policies and laws at international, national and local levels (ibid. p.2).

1.2.2 Land and Water Governance in Uganda: Need for a New Institutional Approach

Governance of land and water resources falls under various institutions in Uganda. The lead national institution responsible for land governance in the country is the Ministry of Land Housing and Urban Development (MLHUD) while water and environmental governance is vested under the Ministry of Water and Environment (MWE). Although land is closely linked to all other environmental resources like lakes, rivers, wetlands, forests and minerals, practical experiences of land and water governance approaches are scanty in Uganda. Coupled by weak collaboration and information sharing among institutions, governance of land and water resources has even become more complex with duplication of governance interventions. At the national level, the MWE which was designated as the national focal point (NFP) for Lake Victoria Basin Commission (LVBC) is responsible for spearheading sustainable development and management of LVB resources. However, MWE often faces conflicting mandates with other ministries specifically designated to manage closely related sectors like land, fisheries, agriculture and energy, etc. Such inter-sectoral linkages require close collaboration, information and knowledge sharing which

unfortunately is very weak in most government institutions. Although theoretically land and water governance in LVB is spearheaded by the LVBC through the Lake Victoria Environmental Management Project (LVEMP II), there is little evidence of concrete and practical experiences linking land and water governance in the region. In general, sectoral approaches dominate governance of natural resource in LVB Partner States. The ever increasing land and water governance challenges in Uganda require a new institutional approach based on internationally agreed principles of good governance ensuring effective, honest, equitable, transparent, accountable and participatory land and water sector.

1.3 Lake Victoria Holocene Epoch and Environment Outlook

Lake Victoria is the second largest freshwater lake in the world (after Lake Superior), covering approximately 68,870 km². Before the coming of the European explorers, the lake had several traditional names such as *Ukerewe*, *Nalubaale*, *Sango*, *Nyanza* or *Lolwe*. It is one of the African Great Lakes. In 1858, British explorer John Speke first saw the lake on his quest for the source of River Nile. From then John Speke was regarded as the first European to see the lake and source of Africa's longest river Nile. In memory of his exploration, the lake was named after the Queen Victoria of the United Kingdom. Lake Victoria is shared by Uganda (43%), Kenya (6%), and Tanzania (51%). Although Rwanda and Burundi are not riparian, they also lie within the wide Lake Victoria Basin. Lake Victoria stretches 412 km from north to south, between latitudes 0°30'N and 3°12'S and 355 km from west to east between longitudes 31°37' and 34°53'E. It is situated on an altitude of 1,134m above sea level. Lake Victoria Basin³ catchment area covers 193,000 km² extending into neighboring countries of Rwanda and Burundi (Kayombo and Jorgensen, 2005).

Table 1: Morphometric Data for Lake Victoria

Country	Lake Surface Area		Catchment Area		Shoreline		Tributary	Basin
	Km ²	%	Km ²	%	Km	%	Km ²	%
Kenya	4113	6	42460	22	550	17	38913	21.5
Tanzania	33756	49	84920	44	1150	33	79570	44.0
Uganda	31001	45	30880	16	1750	50	28857	15.9
Rwanda	0	0	21230	11	0	0	20550	11.4
Burundi	0	0	13510	7	0	0	13060	7.2
Total	68870	100	193000	100	3450	100	180950	100

Source: FAO (2000) and Andjelic (1999)

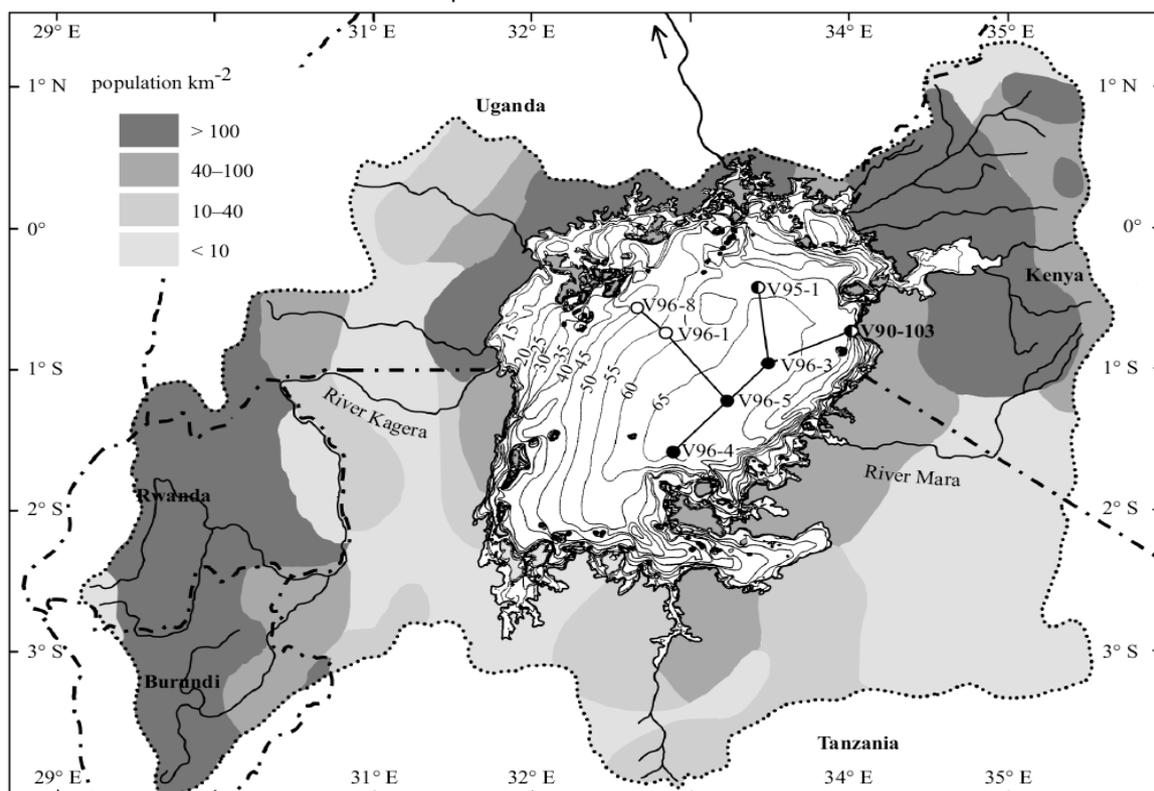
Lake Victoria has a mean depth of 40m, maximum depth of 84m, shoreline of 3,450 km, and a water retention time of 140 years (Cowx *et al.*, 2003). The World Bank report by Kayombo and Jorgensen (2005) confirms that because of the long retention time, pollutants entering Lake

³ The term basin in this study includes the hydrological basin such as underground water resources either with or without connection to surface water.

Victoria remain in for a long time. Domestic and industrial wastewater, solid wastes, sediments from soil erosion in the catchment area, agricultural wastes and atmospheric deposition are the major nutrient sources to the lake. In fact, parts of Lake Victoria, especially the deeper areas, are now considered dead zones, unable to sustain life due to oxygen deficiency in the water (ibid).

The lake occupies crustal sag between the western and eastern rift shoulders and formed as a result of river reversal and ponding during periods of Cenozoic rifting (Bishop, 1969; Beadle, 1981; Scholz *et al.*, 1990, 1998). Despite its size, it has a maximum depth of only 69m (Johnson *et al.*, 1996 cited in Talbot and Lærdal, 1999). A study by Thomas, *et al.* (2000) reveals that seismic reflection profiles confirm the origin of Lake Victoria as a result of regional tilting. They provide an estimated age of 400000 years for the lake basin. Lake Victoria arose from a dry landscape 14600 calendar years ago (14.6ka). Primary production was extremely high as lake level rose in its first 500 years, nourished by the high input of nutrients from the flooded landscape. A few species of cichlids and other fish swam out of their fluvial refugia to colonize the new lake, generating hundreds of new endemic species over the ensuing 14,000 years.

Map 1: Bathymetric map of Lake Victoria, showing Core Locations
Depth contours are in Meters



Source: Verschuren *et al.*, (2002)

The lake experienced progressively stronger stratification and water-column stability through the first half of the Holocene, and diatom productivity dropped to a minimum from 9.8 to about 7.5ka. Verschuren *et al.* (2002) described the environmental history of Lake Victoria over the past 180 years as recorded in core V96-5MC from the deepest part of the lake, where rapid sediment accumulation and the absence of burrowing invertebrates combine to produce a high-quality

sediment archive. Thomas *et al.*, (2000) argued that this period coincides with, but is much longer than, the 8.2ka climatic event that has been observed in many Holocene records from throughout the world. The degree of water-column mixing appears to have steadily increased over the last 6000 years. Short cores from the open lake, document a shift in lake conditions beginning in the 1930s that progressed to the major ecosystem collapse of the early 1980s. The coincidence of the shift in sediment properties in the 1930s with the beginning of rapid expansion of human population and agricultural activity suggests cause and effect. It is conceivable that the lake experienced similar conditions due to natural causes between about 9800 and 7500 years ago.

1.3.1 Overview of Lake Victoria Basin

The Lake Victoria Basin (LVB) region is the economic backbone of over 35 million people whose livelihoods depend on agriculture, fishing, inland water transport, industrialization and tourism. According to the EAC Investment Plan (EAC, 2008:2), Lake Victoria has a total catchment area of 250,000km² of which 68,870 km² is the actual Surface Area. Located in the upper reaches of the Nile River Basin, the lake (Victoria) waters are shared by the three East African Countries of Kenya (6%), Uganda (43%) and Tanzania (51%). Rwanda and Burundi are a part of the upper watershed that drains into Lake Victoria through the Kagera River and between them, occupy about 18% of the lake catchment.

Map 2: Lake Victoria Basin Coverage



Source: Kayombo, Jorgensen (2005)

Lake Victoria Basin (LVB) is a source for domestic water and industrial use, a reservoir for hydropower generation, and a major climate modulator and biodiversity hotspot for the East African Community (EAC). It is upon these enormous potentials that LVB was designated a Regional Economic Growth (REG) zone by the EAC to be exploited jointly in a coordinated manner. Lake Victoria Basin (LVB) is endowed with rich natural resources. Activities such as agriculture and livestock production, hydropower generation, forestry, fisheries, wildlife and tourism, and mining constitute major sources of income and employment to the population within the basin. However, despite its economic potential, more than half of the lake basin population (of approximately 35 million people as of 2005) is living on an income of less than 1 US \$ per day and is relying heavily on subsistence production (EAC, 2006a). Poverty is further aggravated by the rapid population growth in LVB. The dense rural population surrounding Lake Victoria has grown dramatically since 1960 (SEDAC, 2010 cited in UNEP, 2010).

1.3.2 Trends in Land and Water Governance in Lake Victoria Basin

Before 1850, Lake Victoria was still in its pristine status. There was little information known to the Western world about Lake Victoria until 1858 when a European explorer – Sir John Speke settled at the lake in his search for the source of Africa’s longest river Nile. By then, the lake basin resources (fauna and flora) remained in a pristine state with little alterations from human activities. The lake region was sparsely populated with less than 5 million people who depended on traditional fishing methods (like using baskets and spears) and subsistence agriculture. The lake resources (especially land and water) were managed through traditional governance system of natural resources (Okurut, 2010).

Table 2: Trends in Transboundary Governance of Lake Victoria Basin

Year	LVB Population (Estimate in Millions)	Form of Governance	Lake Victoria Status
<1950	5	Traditionally managed. Guided by taboos and norms	Pristine
1950-1980	20	National governments general Laws and reduced traditional aspects	Reduced Pristine Status
1980-2000	30	National governments Environmental Laws & Regulations	Eutrophication near inshore, invasive weeds
2000-Date	30-40	National governments, Regional Cooperation	Eutrophication near inshore

Source: Author based on Okurut (2010)

1.3.2.1 Pre-1900 Traditional Governance Systems

The traditional governance system was based unwritten, informal but systematic taboos, rituals, and rules that prohibit behaviors towards destruction resources and guided the use, control and management of the land, water and other natural resources. Different tribes had different customary practices aimed at protecting the lake basin resources. For instance, in Buganda

Kingdom there were (and still are) more than 50 clans from which all the Baganda people trace their ancestral origin. These clans are rare species of fauna and flora found within the Kingdom, of which every clan member is mandated to conserve and preserve. Several marriage and birth rituals were commonly carried out at the lake and were strictly observed to protect the lake basin resources. Most forests were in pristine status and were only used as spiritual/ceremonial sites, source of herbal medicines and traditional hunting places. It was believed that Lake Victoria and its basin resources like forests belonged to gods who protected them for the present and future generations to come (Okurut, 2010).

1.3.2.2 Post-1900 Modern Governance Systems

From 1900 to 1950 several developments by British government had started in the lake region including the construction of the Uganda Railway. The completion of the Uganda Railway led to improved access to Lake Victoria and opened the region for agricultural operations to produce monoculture crops like tea, sugarcane, cotton and tobacco. By 1950 cotton had already become Uganda's major export crop introduced by the British. Around the same time, a new fish species – the Nile Perch "*lates niloticus*" was introduced in Lake Victoria which eventually became a dominant species of the lake feeding on indigenous cichlid fish species (ibid). The introduction of commercial cotton and tea farming by the British attracted many settlers in the lake region. Even after Uganda attained independence, Lake Victoria basin became the industrial heart of Uganda. The population explosion in 1980s resulted in decline in the lake's pristine status. Lake Victoria has undergone series of profound ecological changes, including strong increases in phytoplankton primary production, replacement of diatoms by cyanobacteria as the dominant group of planktonic algae and the eradication of several hundred species of endemic cichlid fishes after the 1980s population explosion of Nile perch - an introduced piscivore (Verschuren, *et al.*, 2002). The continued threats such as eutrophication, overfishing, introduction of invasive species, pollution and climate change have forced national governments to enact environmental laws and regulations. On top of national environmental laws and regulations, the EAC Partner States are committed to regional cooperation regarding management of transboundary natural resources like Lake Victoria through a modern system of natural resource governance that comprises of conventions, treaties, regional and international laws, among others. Uganda is currently a signatory to many International Conventions such as, Convention on Migratory Species (CMS), Convention on Trade in Endangered Species of Flora and Fauna (CITES) the Montreal Protocol on curbing chlorofluorocarbons (CFCs) and Ozone depletion, Convention on Biological Diversity (CBD) among others (ibid). However, the implementation of the various Conventions presents a lot of challenges including lack of technical and financial resources at national level.

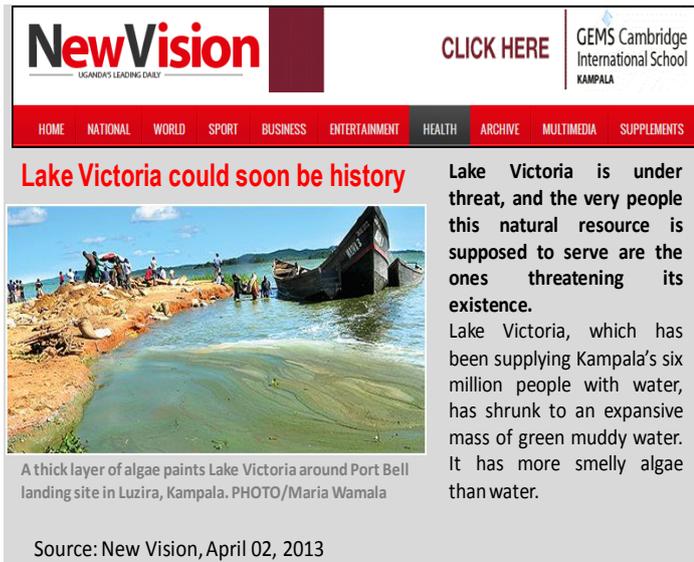
1.4 Major threats facing Lake Victoria and its basin

Lake Victoria is under serious threat. According to the New Vision⁴ published on April 03, 2013, the lake could soon be history if serious interventions are not taken immediately. The major threats emanate from human activities such as overfishing, pollution, conversion of forests and wetlands into farmlands that remove the vegetation cover from soil, resulting in massive silting.

According to Dr. Tom Okurut, the former executive secretary of Lake Victoria Basin Commission, the lake is also under intense pollution from the unplanned urbanization. The waste water from the industries, sewage and rubbish end up into the lake.

It is predicted that the disease burden on Uganda's economy is likely to increase if the degradation of the lake is not checked. Diseases such as cholera, bilharzia and malaria are already increasing, especially where the water has become polluted.

Box 2: Newspaper Highlights Lake Victoria Threat



The screenshot shows a newspaper article from New Vision, Uganda's leading daily. The article is titled "Lake Victoria could soon be history" and features a photograph of a boat on a lake with a thick layer of green algae. The text of the article states: "Lake Victoria is under threat, and the very people this natural resource is supposed to serve are the ones threatening its existence. Lake Victoria, which has been supplying Kampala's six million people with water, has shrunk to an expansive mass of green muddy water. It has more smelly algae than water." The source is cited as New Vision, April 02, 2013.

In addition to this, conflicts over resources such as fishing grounds, wetlands and forests within Uganda and across the country are likely to increase.

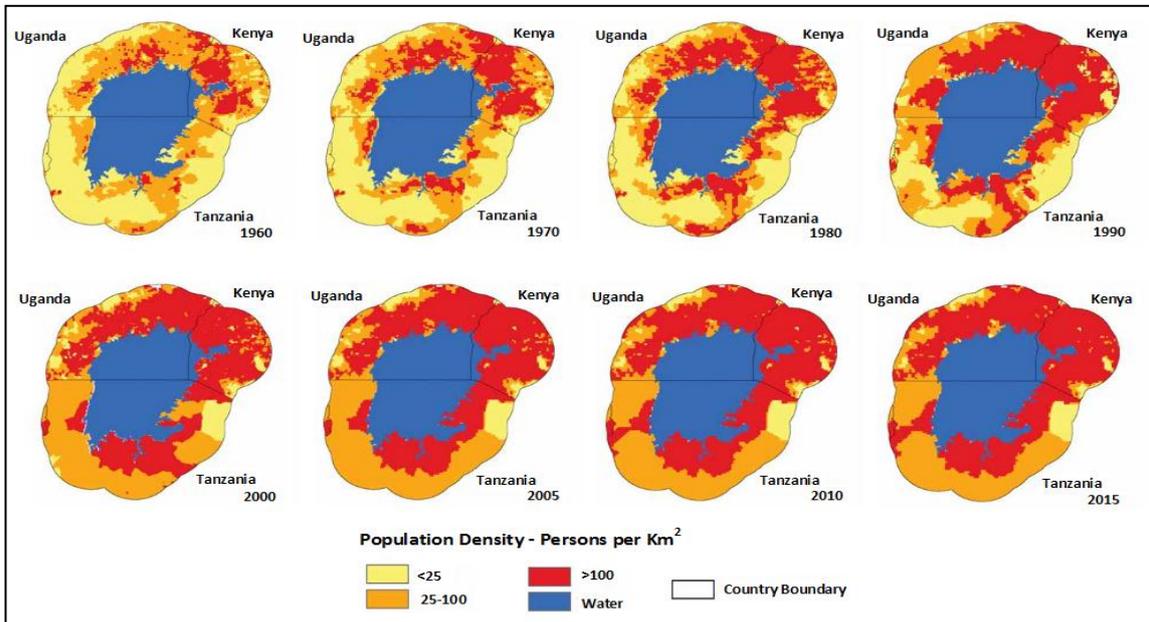
1.4.1 Rapid Population Growth in Lake Victoria Basin

Lake Victoria Basin supports one of the densest and poorest populations in the world with population densities of over 100 persons per square kilometer. Average per capita annual income is estimated to be less than US\$270, which is about 40% of the average per capita income in Sub-Saharan Africa (EAC, 2008). The problems of human poverty and unemployment are widespread, and are compounded by the rapid increase in population, the ongoing public health challenges posed by the high incidence of HIV/AIDS and malaria, unplanned urbanization and environmental degradation (Ibid). According to UNEP (2006b), population growth in Lake Victoria Basin is significantly higher than the rest of Africa. Since 1960 (see Map. 3), population growth within a 100-Km buffer zone around the lake outpaced the continental average. This reflects growing dependency and pressure on lake's resources. The population is largely concentrated along the lake edge and within the Kagera River Basin, which is shared by Burundi, Rwanda, Tanzania and Uganda. The rapid population growth associated with unplanned and unregulated urbanization has resulted into expansion of informal settlements (slums) in Lake Victoria Basin.

⁴ The New Vision, April 02, 2013 Lake Victoria could soon be history, Accessed April 4, 2013 <http://www.newvision.co.ug/news/641258-lake-victoria-could-soon-be-history.html>

Increasing rural-urban migration and the influx of refugees are highlighted as issues that need to be addressed regionally (EAC, 2006a).

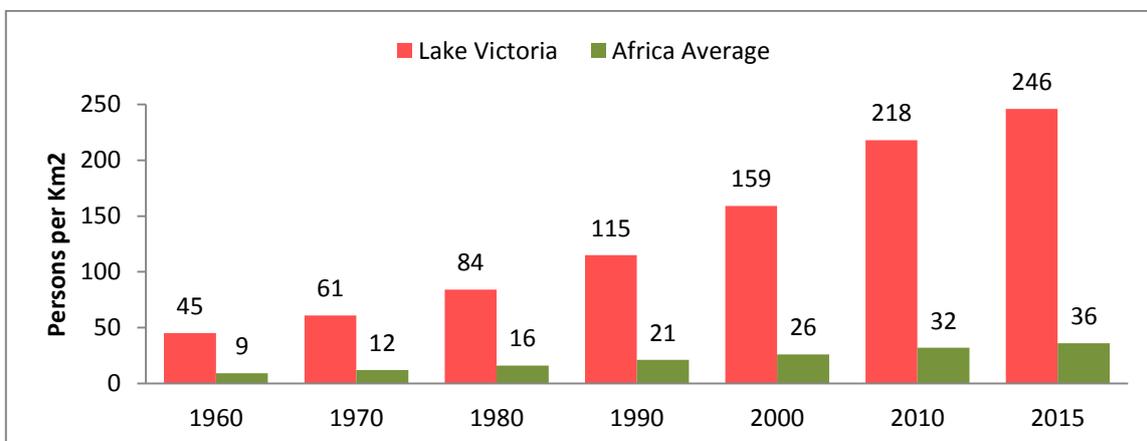
Map 3: Rapid Population Growth around Lake Victoria (1960 – 2015)



Source: UNEP/GRID-Soux Falls (2006)

More than half of the basin population is living on an income of less than US\$ 1 per day and relying heavily on subsistence production. Lake Victoria Basin is characterized by a high level of illiteracy, inappropriate skills for production and income generation activities. Mortality rates are high, tuberculosis and waterborne diseases like malaria, typhoid and bilharzias are widespread while malnutrition is evident especially among children (EAC, 2007). Access to health care services is inadequate and health facilities are commonly inefficient (ibid). In comparison to continental average, the population density in Lake Victoria Basin is growing at a faster rate than that of the entire African continent (Figure.1).

Figure 1: Population Density Growth around Lake Victoria



Source: UNEP (2006b)

1.4.2 Rapid Urbanization in Lake Victoria Basin

Although there are few large cities such as Kampala, Kisumu and Mwanza on Lake Victoria, there is a huge population migrating from rural to urban centers. The region is experiencing a process of rapid urbanization with massive migrations to many towns, most of which are concentrated along the lake edge. Rural-urban migration is highest among the youth who constitute the biggest Lake Basin population. While the youth migrate to towns in search for employment and better living conditions, majority of the rural poor especially the elderly, women and children remain in rural areas in anticipation of remittances sent by their children working in the cities (EAC 2007). The trend in rural-urban migration is envisaged to increase as agricultural production in rural areas continue to decline due to poor land management practices, negative climate change impacts like droughts and emergence of new crop diseases in Lake Victoria Basin.

Increased rural-urban migration and the influx of refugees are associated with problems of poor sanitation, increased disease outbreak such as cholera, dysentery, Typhoid and HIV/AIDS as well as rapid increase in crime, drug abuse and prostitution especially among unemployed youth who constitute the biggest population in the lake basin. In order to address the growing urban problems, in 2002 UN-HABITAT through its Urban Management Programme (UMP) with support from Sida, initiated the Lake Victoria Region City Development Strategies Programme (LVRCDSP) to strengthen the capacities of urban centers located along the shores of Lake Victoria. The initiative mobilized local authorities and stakeholders to develop a programme for laying out City Development Strategies (CDS) for improved urban environment and poverty reduction, and address the absence of effective planning in the urban centers. The pioneer CDS cities in Phase I of the Lake Victoria CDS initiative were Kisumu in Kenya, Kampala in Uganda and Musoma in Tanzania (EAC 2007).

1.4.3 Declining Quality and Quantity of Water in Lake Victoria

Other concerns have been raised in recent years about declining water quality and, in particular, about the infestation of Lake Victoria with water hyacinth '*Eichornia crassipes*' and '*Salvinia molesta*' weeds. As no effective means of controlling this weed has yet been found, the water hyacinth will continue to disrupt water transport, water supplies to urban areas, the fishing industry, power generation and the livelihoods of many local communities (UNEP, 2002:62). Besides invasive weeds, the quality of fresh water in LVB is rapidly deteriorating due to pollution caused by human activities. The 2008 State of Environment Report for Uganda shows that the major sources of pollution in Uganda's water bodies are from rural and urban discharges, agricultural and industrial activities and acid rain. Industrial wastes are still discharged in the lake without treatment. These activities are responsible for causing major and persistent health problems and eutrophication due to increased nutrient loads into the water bodies. Although in economic terms, it is argued that water is a 'free good', in reality it is not because once polluted, the cost of its purification are very high (NEMA, 2008) and tend to be reflected in increase water bills which in turn excludes especially the poor from clean and safe water access. The constant decline in water

levels caused by climate change has had a negative effect on hydropower generation with many LVB urban centers receiving constant power load shedding. The reduction in hydroelectricity power generation has equally affected industrialization and escalated unemployment in Lake Victoria Basin.

1.4.4 Discharge of Agro-chemicals, Industrial Wastes and Refuse in Lake Victoria

Discharges of agricultural inputs, nutrients, fertilizers, industrial and municipal wastes affect the quality and status of the open waters of the lake basin. These inputs and wastes have an influence on water quality and nutrient level, and these adversely affect aquatic life and integrity of water resources (EAC, 2006a). The LVEMP study on pollution loads (COWI 2002) indicates that there are 87 large towns in the Lake Victoria basin (51 in Kenya, 30 in Tanzania and 6 in Uganda). The pollution loading into the lake originating from both urban waste water and industrial discharge is shown in Table 3.

Table 3: Total Pollutant Load into Lake Victoria

Country	Pollution Loading to Lake Victoria (Tons / Year)					
	Urban Waste Water and Runoff			Industrial Loading		
	BOD	Total Nitrogen	Total Phosphorus	BOD	Total Nitrogen	Total Phosphorus
Tanzania	5,069	719	292	3,259	324	208
Kenya	10,724	2,019	848	860	57	46
Uganda	2,145	767	484	1,489	33	88
Total	17,938	3,505	1,624	5,606	414	342

Source: Author based on data from COWI (2002)

Table 3 shows that the pollutant loading to the lake from urban areas was 17,938 tons /year of Biochemical Oxygen Demand (BOD), 3,505 tons /year of Nitrogen and 1,624 tons/year of Phosphorus. Most of the urban pollution is from waste water discharge and run off from flower farms located on the shores of the lake. The pollutant load to the lake due to industrial activities is 5,606 tons / year of BOD. The total number of major industries in the catchment area is 68 (16 in Kenya, 34 in Tanzania, 18 in Uganda) (COWI, 2002). A number of basic industries include breweries, leather tanning, fish processing, agro-processing, abattoirs as well as small scale gold mining - which is on increase in parts of Tanzania catchment (Kayombo and Jorgensen, 2005). If mining wastes are not well contained, might lead to mercury discharges into the water (ibid). Increase in nutrient load (eutrophication) has accelerated emergency of invasive water weeds such as water hyacinth and potentially toxic blue-green algal blooms which have affected fish stocks in Lake Victoria. Coupled by over fishing and use of poor fishing methods, the fish stocks have gradually reduced from over 300 species to about 3 fish species Viz. Tilapia, Nile Perch and Cichlids. The introduction of the Nile Perch species in the lake is also attributed to the rapid decline of other fish species in Lake Victoria.

1.5 Research Objectives, Questions and Hypothesis

The objective of the study was to examine the role of Lake Victoria Basin Commission (LVBC) and other formal and informal institutions in promoting secure land and water rights in Lake Victoria Basin. Further to accomplish this objective, the study focused on two specific tasks:

1. To critically analyze the status of land and water rights and its effects on livelihoods in one of the major catchment areas of Lake Victoria Basin
2. To identify the challenges impeding effective land and water governance in Uganda.

According to the research objectives, the following **research questions** were answered:

1. What is the existing legal and institutional framework guiding land and water governance in Uganda?
2. How does Lake Victoria Basin Commission promote secure land and water rights in Lake Victoria Basin? And apart from LVBC, what other formal and informal institutions are involved in land and water governance?
3. How do secure land and water rights contribute to sustainable livelihoods and poverty alleviation in Lake Victoria Basin in Uganda?
4. What challenges impede effective land and water governance in Lake Victoria Basin and how can land and water governance be improved in Uganda?

Despite the presence of various formal and informal institutions to promote secure land and water rights in Lake Victoria Basin, the study set out to investigate the **hypothesis** that:

Insecure land and water rights continue to prevail in Uganda due to lack of a regulatory framework to guide different stakeholders.

1.6 Justification and Limitations

Much as the Government of Uganda recognizes the obvious need for improving land and water governance, there has been very little (if any) empirical evidence and knowledge base on land and water governance in the country. This research serves to fill this wide knowledge gap and stimulate wider scientific and policy debate into the governance dilemma facing Uganda's land and water sector. Understanding the close linkage between land and water resources will enhance sustainable land and water development and mitigate the risks that emanate from treating land and water resources as separate while in reality these two resources are closely interlinked. The research findings will therefore assist the various institutions in East Africa as a region and Uganda in particular to evaluate and explore joint development strategies that will enhance good governance in land and water sector. Given that the fundamental decision affecting governance of land and water resources in many developing countries concerns the type of institutions in place, it is paramount to understand the role played by the different institutions (formal and informal), the participation of various stakeholders (with different interests) and the challenges faced at different levels of governance. The research findings offer a critical

analysis of these interactions and recommend sound institutional and policy reforms that will result into more efficient, effective and responsive delivery of services of adequate quality to improve land and water governance in Uganda. Furthermore, the transboundary nature of Lake Victoria and its wide basin shared among five countries (Uganda, Kenya, Tanzania, Rwanda and Burundi) calls for a shared sustainable vision. This vision can only be articulated and achieved through a joint policy and regulated framework for improving land and water governance in the lake basin. Finally, the current threat posed by climate change and the increasing global food insecurity amidst rapid population growth, is likely to arouse more fears, concerns and challenges for governance of scarce resources like land and water in many developing countries. This study points out the need for developing innovative climate change adaptation strategies that would minimize the negative impacts of climate change and environmental risk in LVB.

However the study was limited in scope and focus to only formal and informal institutions involved in land and water governance in Uganda. Under formal institutions, the scope is limited to a set of existing laws, regulations and rules and the legally mandated organizations through which land and water laws are enforced by the government. On the other hand, the focus on informal institutions points at the traditional norms, cultures and ethics of the people living in Lake Victoria Basin. The case study area (Wakiso district) falls within the largest monarchical institution in Uganda (i.e. the Buganda Kingdom) that owns the biggest part of land in the lake basin. Given the complexity and overlapping mandate of these institutions, the study adopts a case study approach to critically examine the role of formal and informal institutions in promoting secure land and water rights in Lake Victoria Basin.

1.7 Overview of the Research Process and Organization of the Thesis

The research process followed a step-by-step procedure through which different tasks were carried out in order to answer the specific research questions and hypothesis. The research process was categorized in three phases.

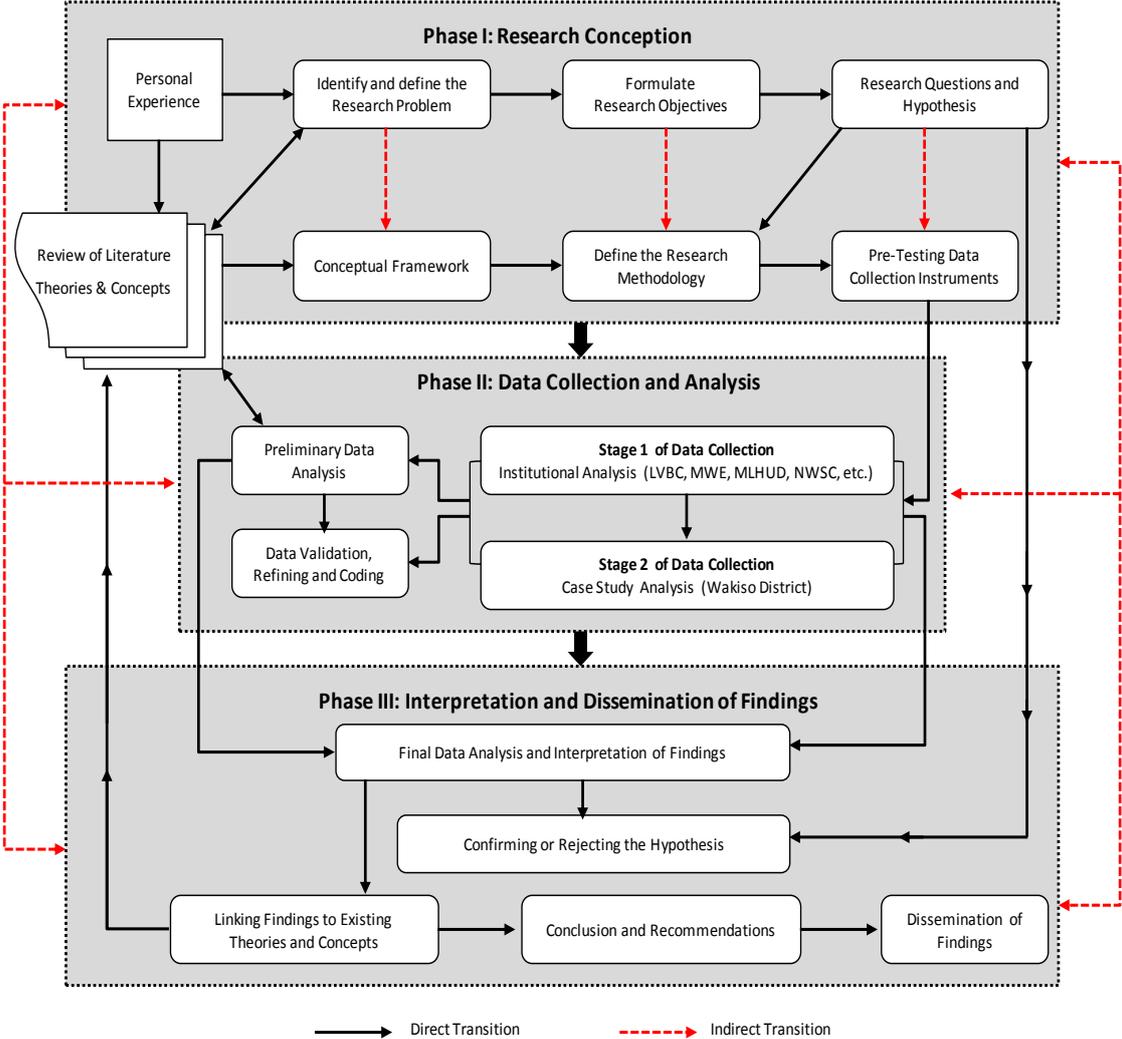
Phase I of the research process began with the researcher's own experience about the increasing land and water crisis in Uganda. In order to clearly identify and define the research problem, a review of existing literature together with media reports showed that the land and water crisis in Uganda is mainly a crisis of governance. Based on the research problem, objectives of the research were formulated. This was followed by formulation of research questions and hypothesis to guide the research. A review of existing theories and concepts resulted into formulation of the conceptual framework that set a path for deciding on the appropriate research methodology. From this stage, data collection instruments like questionnaire and interview guides were developed and pre-tested to ensure that the main research questions are answered. This stage directly transits to the second phase of the research process.

Phase II of the research process mainly focused on data collection and analysis of the research findings. Data collection was carried out in two stages. The first stage of primary data

collection focused on performance of institutions involved in land and water governance in Lake Victoria Basin. At regional level, Lake Victoria Basin Commission (LVBC) was purposively selected due to its legal mandate to manage Lake Victoria Basin resources in a sustainable manner. At the national level, the key ministries involved in land (MLHUD) and water (MWE) were equally sampled for the study. Primary data was also collected from other specialized national agencies like the NWSC, NEMA and the Uganda Land Commission. The second stage of primary data collection was done through household survey carried out in Wakiso district located in Lake Victoria Basin. Primary data was equally collected from Wakiso District Local Government. Phase II also involved preliminary analysis of data. Primary data was validated, refined and coded before the final analysis and interpretation of the research findings in the third phase.

Phase III therefore focused on interpretation and dissemination of the research findings. The research hypothesis was confirmed and the findings were linked to the existing theories and concepts. General conclusions and recommendations were made out of the research findings. Among the key outputs of the research include a model for improving land and water governance in Uganda.

Figure 2: Overview of the Research Process



Source: Author

The thesis was organized in nine chapters with the aim of answering the research objectives and questions.

Chapter One gives a general introduction to the topic of land and water governance and why it is important. This introductory chapter aims at providing the necessary background information and motivation for the research. The chapter outlines the objectives, research questions and hypothesis and describes the research process. It ends by briefly explaining how the thesis is organized.

Chapter Two focuses on understanding the dynamics of land tenure and land rights in Uganda. The chapter examines the significance of land in Uganda's development process and explains the land tenure systems and status of land tenure security in Uganda.

Chapter Three explores key issues and responses in management of water resources in Uganda. The chapter begins by providing a general overview of water resources in the country and examines the role of water in Uganda's development process. It points out the key emerging issues in management of water resources and also explores secure water rights issue in Uganda.

Chapter Four provides a theoretical orientation of land and water governance concepts. This chapter explains in details the major theories and concepts upon which the research is based. It starts by defining the concept of land and the theory of land management and then elaborates on the historical perspectives and trends in governance. The chapter points out some innovative approaches to water management and analyzes the origin of the term water governance.

Chapter Five presents the conceptual framework of the research which is derived from the theoretical framework in chapter four. The conceptual framework provides an interconnection between the theories in relation to the research problem under investigation. The interconnections and relationships formed the basis on how to collect the data thus providing a direct linkage to the sixth chapter of the study.

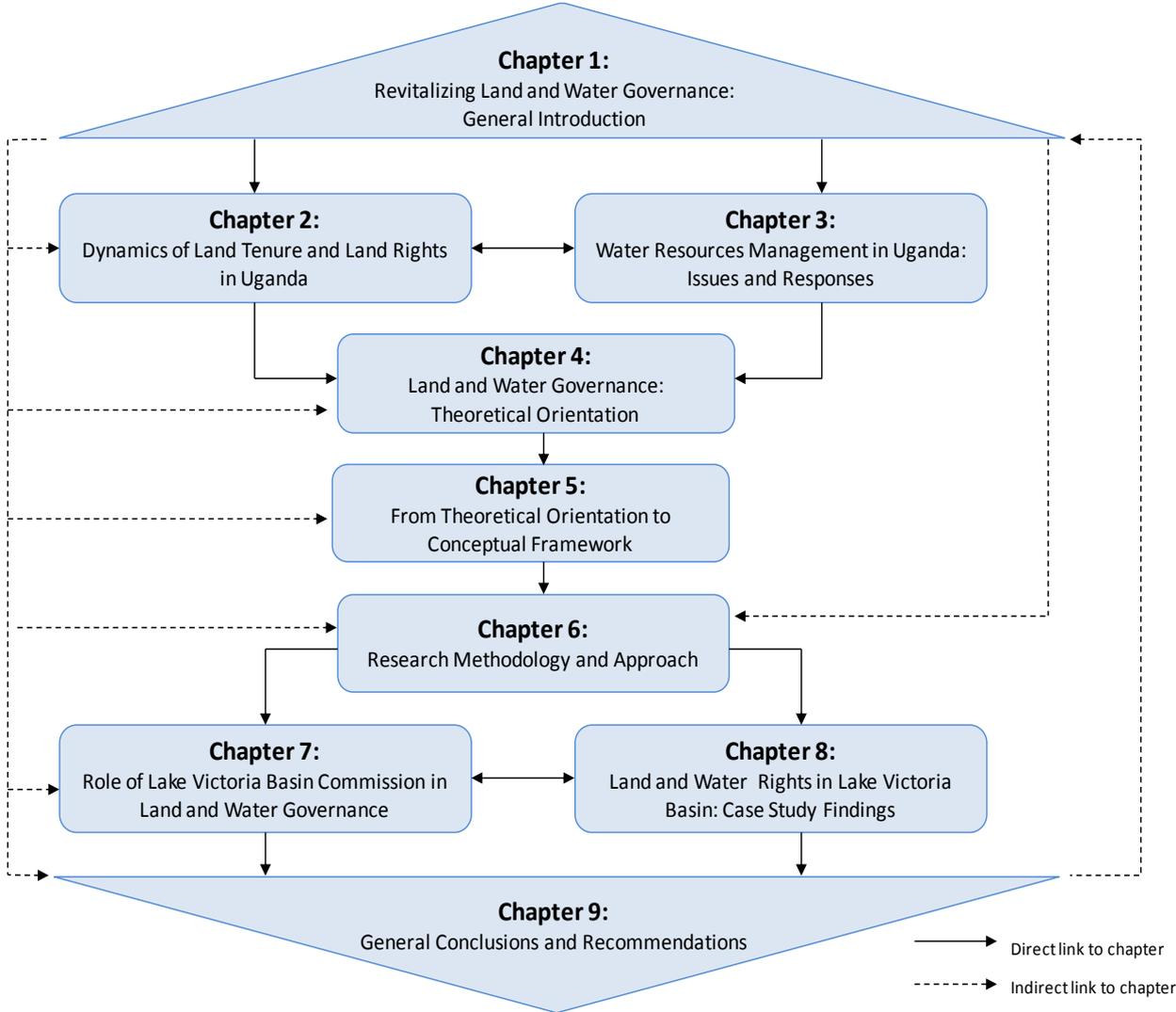
Chapter Six explains the research methodology and approach. This chapter explains a step by step process followed in adoption and application of both qualitative and quantitative research methods. Chapter six also explains how the case study (Wakiso district) was selected and the types of data collected. The chapter provides strategies for data reliability and validity and ends by providing the procedure for analysis of quantitative and qualitative data used in the study.

Chapter Seven examines the role of Lake Victoria Basin Commission (LVBC) in land and water governance. This chapter starts by explaining the background and mandate of LVBC and the legal framework for establishment of the Commission. Chapter seven explains the objectives and sustainable land management strategy of LVBC and how it promotes secure land and water rights in Lake Victoria Basin. The chapter points out other formal and informal institutions that collaborate with LVBC and ends by discussing the challenges facing LVBC in promoting land and water governance in LVB.

Chapter Eight analyzes the status of land and water rights in Lake Victoria Basin and how secure rights contribute to poverty alleviation in Wakiso district in Uganda. The final chapter of the thesis is development based on the research findings in chapter eight and seven.

Chapter Nine presents the general conclusions and recommendations. This final chapter suggests a model for improving land and water governance in Uganda. Since most EAC Partner States share similar socio-economic, political and ecological conditions, the suggested model can be adopted and contextualized by Partner States to improve land and water governance in the entire Lake Victoria Basin. The direct and indirect linkage among the nine chapters of this thesis is illustrated in Figure 3.

Figure 3: Structure of the Thesis



Source: Author

Chapter Two: Dynamics of Land Tenure and Land Rights in Uganda

“It is now well-recognized that secure land and property rights for all are essential to reducing poverty, because they underpin economic development and social inclusion”, Anna Tibaijuka – Formal Executive Director, UN-HABITAT

2.1 Land in Uganda’s Development Process

Land constitutes the main capital that is available to the people of Uganda. About 50% of households’ wealth in Uganda is held in the form of land and land provides the majority of employment opportunities (UBOS, 2010). Land is a commercial asset that can be used and traded. Land is a fundamental factor of production and indeed Uganda’s prime and critical asset in the development process. Land is a critical factor of natural and human managed production systems, influencing the level of natural capital and social, economic development (UNEP, 2006). It supports agriculture on which the country depends as an engine for economic growth and as a basis for rural livelihoods (NEMA, 2002). In terms of socio-cultural outlook, land in Uganda is more than just a tradable asset. It is a key factor in shaping individual and collective identity through its history, the cultural expressions and idioms with which it is associated. Land influences spirituality and aesthetic values of all human societies. It defines the origin of mankind, beliefs, norms and traditions that govern communities. To some people, land is a god of supernatural abilities; through which our ancestors bless the living with fertility and productivity. Land is perhaps, the most essential pillar of human existence and national development (MLHUD, 2011).

Table 4: National Land Cover Statistics (Km²)

Land Cover Type	Year, 1990	Year, 2000	Year, 2005
Built-up Areas	365.7	365.7	365.7
Bush-lands	14,223.9	12,624.9	11,893.6
Commercial Farmlands	684.5	684.5	684.5
Cultivated lands	84,010.0	94,526.7	99,018.4
Grasslands	51,152.7	51,152.7	51,152.7
Impediments	37.1	37.1	37.1
Plantations- Hardwood	186.8	153.3	138.8
Plantations- Softwood	163.8	80.0	192.0
Tropical High Forests	2,740.6	2,248.2	2,036.3
Tropical High Forest Normal	6,501.5	5,333.5	4,830.7
Water bodies	4,840.4	4,840.4	4,840.4
Woodlands	39,740.9	32,601.4	29,528.1
Total	241,550.7	241,550.7	241,550.7

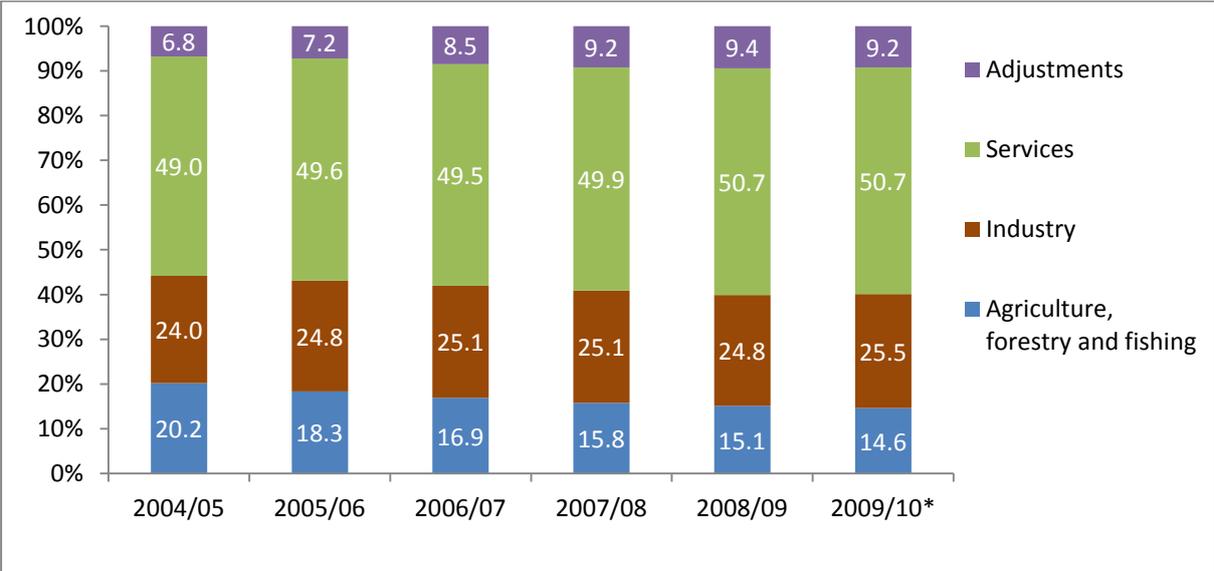
Source: UBOS (2010)

Uganda has a total area of 241,550.7 square kilometers (km²) of which open water and swamps cover 41,743.2 km². Land area is 199,807.4 km². Cultivated land cover increased from 84,010 km²

in 1990 to 99,018.4 km² in 2005 (UBOS, 2010). While land-cover types pose limitations for potential land-uses, other factors such as technology, tenure type and population pressure influence the speed and nature of land-uses. For example, forests can be used for ecotourism, timber harvesting, or even transformed to settlement or agriculture, causing human induced land-cover change (NFA, 2009 cited in NEMA, 2008).

Over the past years, rapid population growth in the country has increased the demand for land beyond its fixed supply limit and as a result, a spiral of violent conflicts over use and ownership of land resources have become rampant in many parts of the country. Demographic pressure implies more intensive use of natural resources which translates into environmental decline (Clay *et al.*, 1994). Massive land-cover change without corresponding good land management poses socio-economic and environmental threats to Uganda and as a result, it has increasingly become difficult especially for the poor to have equal access to land and water resources in the country (NEMA, 2008). Agriculture being the backbone of Uganda’s economy, land without water is barely unproductive for most agricultural practices in the country. The agricultural sector provides about 70% of the employment in Uganda and contributes approximately about 21% of the total Gross Domestic Product (GDP) and 90% of the total export earnings (UBOS, 2010). In terms of contribution to total GDP, the share of agriculture, forestry and fishing in total GDP at 2002 constant prices continued to decline from 15.1% in 2008/09 to 14.6% in 2009/10 in line with recent trends in structural transformation of the economy (MFPED, 2010). The services and industrial sectors are continually becoming the major drivers of growth, and the share of industry increased from 24.8% to 25.5% (ibid).

Figure 4: Sectoral Composition of GDP (%)



Source: Author based on UBOS and MFPED (2010)

*2009/10 figures are provisional

Despite the continued decline in agricultural to GDP, this sector still employs the biggest population and remains the major foreign exchange earner for the country. It should be noted that even the

growth in other sectors like industry (mining, quarrying, construction, waters and electricity supply, agro processing and manufacturing etc.) and service (trade, tourism, transport and communication, etc.) equally depend on land and water resources. Therefore, the land sector remains the bedrock of all development and is expected to play a crucial role in the development of other sectors and, especially, in provision of leverage for efforts in poverty reduction, the promotion of governance and social justice, political accountability and democratic governance, the management of conflict and ecological stress and sustainable transformation of the economy as a whole (MLHUD, 2011).

2.2 Land Tenure Systems and Status of Tenure Security in Uganda

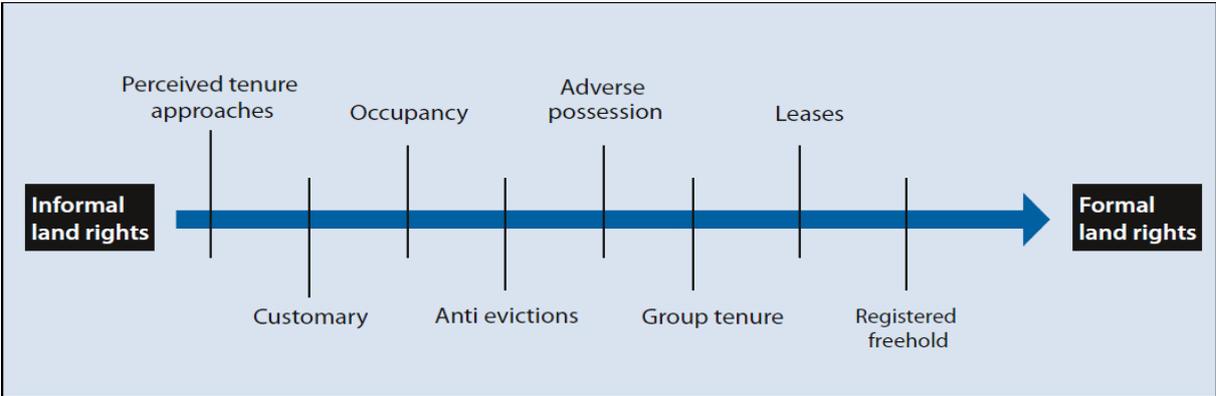
Land tenure issues are becoming increasingly important worldwide. Problems such as high population pressure, increases in resource degradation, food shortages, transformations of political systems and regional and supra-regional resource conflicts have brought the land issue to the public's attention. Land tenure comprises the habitual and/or legal rights that individuals or groups have to land, and the resulting social relationships between the members of the society (Kirk *et al.*, 1998). Although no single form of tenure can meet the different needs of all social groups, recognition of a range of land tenure options can enable both women and men from all social groups to meet their changing needs over time (UN-Habitat/GLTN, 2008).

Land Tenure refers to relationship whether legally or customarily defined, among people as individuals or groups, with respect to land and associated natural resources (FAO, 2002). It is the way land is owned, occupied, used and disposed of within a community. Land tenure systems differ across Uganda and tenure practices are a mixture of traditional practice, colonial regulations and post-colonial legislation (Kamanyire and EPRC, 2000). *Land tenure systems* define the manner in which property rights are to be allocated within societies. In simple terms, land tenure systems determine who can use what resources for how long, and under what conditions (FAO, 2002:7). Each tenure system includes special forms of property rights distribution, diverse levels of *tenure security* to members, and different actors determining land allocation, control and transfer.

Land Tenure Security can be defined as the degree of confidence that land users will not be arbitrarily deprived of the rights they enjoy over land and the economic benefits that flow from it (UN-Habitat/ GLTN, 2008). Tenure security creates incentives for land users to invest labor and other resources to improve and maintain the productivity of farms, the quality of dwellings and the value of land and property (ibid). People with insecure tenure face the risk that their rights to land will be threatened by competing claims, and even lost as a result of eviction. Without security of tenure, households are significantly impaired in their ability to secure sufficient food and to enjoy sustainable rural livelihoods (FAO, 2002). The degree of land tenure security varies across the different tenure systems. Land tenure security is partly a matter of perception, and can be safeguarded under various forms, provided the rights of land users and owners are clear. In addition to formal titles, security can be achieved through clear, long-term rental

contracts, or formal recognition of customary rights and informal settlements, with accessible and effective dispute mechanisms. The range of possible forms of tenure can be considered as a *continuum* (UN-Habitat/ GLTN, 2008). The global land community has accepted that individual land titling on its own cannot deliver security of tenure to the majority of people in the world and as quickly as needed and that a *continuum of land rights* needs to be adopted by countries. Any country adopting a *continuum of land rights* at scale also for the poor will need to introduce some form of land recordation (Zevenbergen, 2011). Each continuum provides different sets of rights and degrees of security and responsibility. Different tenure systems may operate across a continuum as illustrated by UN-Habitat/GLTN in the Figure 5.

Figure 5: A Continuum of Land Rights



Source: UN-Habitat /GLTN (2008)

2.3 Evolution of Land Tenure Systems in Uganda

Land tenure systems are presently going through a rapid transformation and/or reform process following the colonial interventions and the wave of independence, the breaking down of the socialistic block and democratization and divestiture (Kirk, 1999). Therefore a review of historical dynamics of land tenure systems is paramount for subsequent understanding of land ownership and tenure security in Uganda. Before the advent of colonialism, diverse forms of customary tenure systems existed in Uganda until the signing of the 1900 Buganda Agreement with the British.

Prior to the 1900 Buganda agreement, traditional land rights were governed through customary law, which in most cases is oral and unwritten. Land rights and ownership varied among different ethnic groups. Customary tenure rights varied from place to place, however, scholarly researches have indicated that whatever the differences, none of the communities in Uganda recognized individual ownership of land. Land was basically held under a “bundle of customary rights”. There was however, recognition of various individual rights to possess and use land subject to sanction by the family, clan, or community (Rugadya, 1999). Indigenous people considered customary tenure as a medium that defines and binds together social and spiritual relations within and across generations (Njonjo, 2002). This notion applies in many African

countries where “land belongs to the vast family of whom many are dead, few are living, and countless members are still unborn” (Lawrence, 1966).

Although customary rights were not legal arrangements, Rugadya (1999) argues that in pre-colonial Uganda, the individual had the right to utilize the land as he/she thought best, to rent out a piece of land, pledge crops on the land but not the land itself, sell land subject to the approval of the family, dispose of the land according to the customary laws of inheritance, dispose of trees growing on the land, prohibit grazing near his/her homestead and fence the homestead. The clan or family had the power and right to settle land disputes, exercise the right or option to buy any land offered by its members, or prohibit the sale of clan land to an undesirable person and declare void any land transaction which had not received its approval. The general community had the right to graze communally but damage to crops had to be made good. Therefore a system of both individual and communal holding of land in Pre-Colonial Uganda was highly respected among different ethnic groups as a way of creating harmony and sustainable utilization of land resources, which forefathers bequeathed to the present generation who in turn will pass it on to the next generation.

While Britain made Uganda a protectorate in 1894, several attempts to formalization of customary tenure in Uganda were made. The British colonial administration believed that industrialized farming was better than small-scale farming, and that large-scale farming was the only way through which the Uganda Protectorate could achieve economic viability and self-sustainability (Batungi, 2008). Since large-scale agricultural farms could only be established by foreigners, the protectorate had to alienate secure agricultural land to the foreigners and this necessitated the introduction of formal private land ownership by registered title (Batungi, 2008:59). The British Administration hence introduced three new forms of land tenure namely; *Freehold*, *Leasehold* and *Mailo* Tenure. Customary land tenure was recognized but within limits. Under the *Crown Lands Ordinance 1903*, indigenous Ugandans had a right to occupy any land (outside the Buganda Kingdom and urban areas) not granted in freehold or leasehold with prior license or consent in accordance with their customary law⁵.

In 1975, a Presidential Land Reform Decree by Idi Amin was issued and declared all land to be *Public Land*. With immediate effect, all land was to be held in trust by the State for the people of Uganda and was to be administered by the Uganda Land Commission (ULC). The Land Reform Decree abolished freehold and Mailo tenure which had been introduced by the British Colonial Administration and converted them into Leasehold. The decree though not fully implemented remained Uganda’s land law until 1995 when a new Constitution was enacted. The 1995 Constitution abolished the 1975 Land Decree and restored the land tenure systems (customary, freehold, leasehold, and Mailo) that were in existence by independence in 1962. For the first time, the 1995 Constitution recognized customary tenure as a legal form of land

⁵ Section 24(4) of the Crown Lands Ordinance 1903 (repealed).

ownership. From then, the Constitution (1995) together with the Land Act (1998) prescribed four land tenure systems in which land shall be owned in Uganda.

Table 5: Percentage Distribution of Land Tenure Systems in Uganda

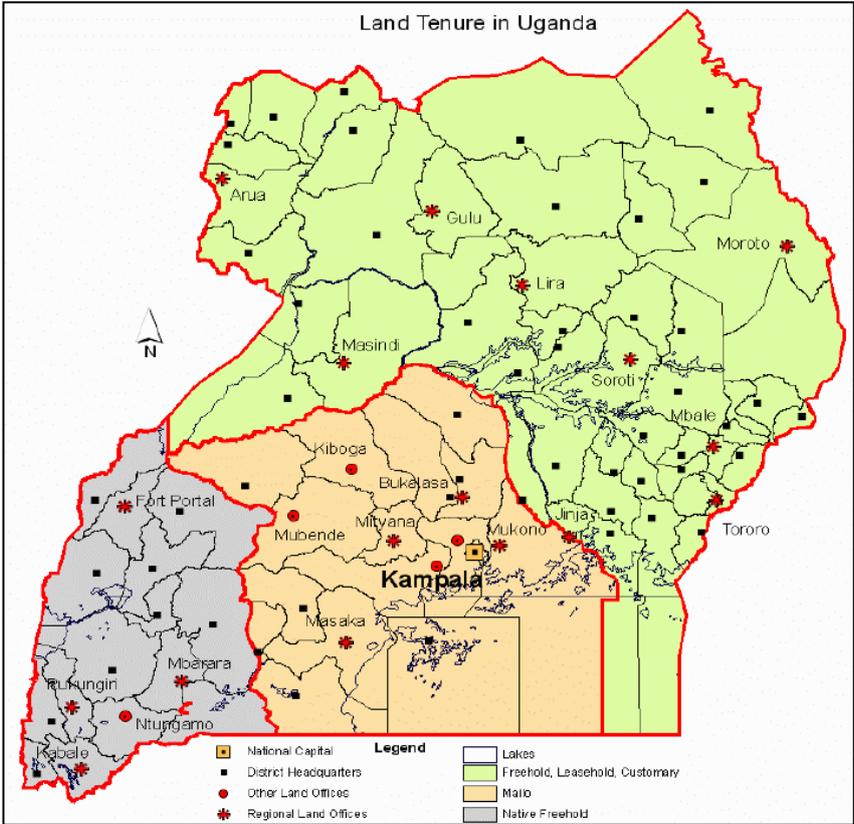
Tenure System	Uganda (%)	Central (%)	Eastern (%)	Northern (%)	Western (%)
Registered freehold Mailo	7.8	8.9	7.8	1.8	11.1
Unregistered freehold Mailo	35.7	78.3	11.9	6.6	33.6
Leasehold	15.9	12.3	26.4	15.6	8.8
Customary	40.6	0.4	53.7	76.1	46.6

Source: Uganda National Household Survey, 2002/03

2.3.1 Customary Land Tenure

Customary Land tenure is a system whereby the rights to own, use and dispose land are held in accordance with customary rules and regulations that may vary according to different ethnic grouping and regions. It is the most dominant land tenure system covering 68.6% in Uganda (MLHUD, 2010). Customary tenure is found all over the country, but predominates in the northern and eastern cereal-cotton-cattle farming system, as well as the West Nile cereal-cassava-tobacco system (Kamanyire and EPRC, 2000) as shown in the Map 4.

Map 4: Distribution of the different Land Tenure Systems in Uganda



Source: MLHUD (2010)

Customary tenure does not recognize individual ownership of land. It only recognizes the rights of the individual to possess and use land subject to superintendence by his family, clan or community.

The disadvantage is that it does not encourage record keeping, often making it difficult to resolve land use disputes (Kamanyire and EPRC, 2000). It is alleged that customary tenure is associated with three major problems, that (a) it does not provide security of tenure for land owners; (b) it impedes development because it does not allow the advancement of land markets, through which, those who need land for development can acquire it; (c) it discriminates against women, and does not accord them land rights (MLHUD, 2011:20). Customary tenure continues to be regarded and treated as inferior in practice, to other forms of registered property rights, denying it opportunity for greater and deeper transformation. It is also assessed as lesser to other tenures that have titles for proof of ownership in courts of law in the administration of justice. Customary tenure continues to be disparaged and sabotaged in preference for other forms of registered tenures, denying it the opportunity to progressively evolve (MLHUD, 2011).

2.3.2 Mailo Land Tenure

Mailo land tenure was introduced in Uganda as a result of the 1900 Buganda Agreement commonly known as the Uganda Agreement with the British. Mailo land tenure is peculiar to the Buganda Kingdom and had its measurements in miles, but a corruption of pronunciation in the native Luganda language resulted in the term “Mailo”. Under Article 15 of the 1900 Buganda agreement, the total land area of Buganda was estimated to be 19,600 square miles (approximately 20% of the total area of Uganda) and was divided between the *Kabaka* (King) of Buganda and other notables in the Protectorate Government. This land included that of the “lost” counties of Buyaga and Bugangaizi, which had been forcefully removed from the Bunyoro Kingdom with the help of the British colonial administration (Batungi, 2008). A meeting convened by Sir Harry Johnston (on behalf of the British) with the regents and principal chiefs of the Buganda Kingdom re-distributed land as below:

Table 6: Distribution of Mailo Land Tenure

Land re-distribution category	Size of land (Square Miles)
The <i>Kabaka</i> (King), Members of the Royal Family, Regents, County Chiefs and other leaders received private and official estates	958
The 1000 chiefs and private land owners received estates, the majority of which were already in their possession	8,000
The land set aside for existing Buganda government stations	50
Land granted to three Missionaries	92
Land set aside for forest reserves	1,500
Waste and uncultivated land that was vested in the Queen of England	9,000
Total Area (Buganda Kingdom, Buyaga and Bugangaizi counties)	19,600

Source: Author, based on Literature

Under *Mailo tenure system*, land is held in perpetuity and a certificate of title is issued. The principal advantage of this system is that it provides security of tenure, thus allowing long-term investments including those related to conservation. Originally, there were two categories of

ownership under this system (*Official and Private Mailo*). In the case of *official Mailo*, grants of land were attached to specific offices in the Buganda government. They could not be subdivided or sold but passed intact from original office holder to his successor. In *private Mailo*, the owner held rights in the land akin to those of freehold and could dispose of land as he wished. Official Mailo land was transformed into public land in 1967, with the abolition of kingdoms (Kamanyire and EPRC, 2000).

The major challenge faced with Mailo tenure is the multiple, overlapping and conflicting interests and rights. The enactment of the *Busuulu and Envujjo* Law of 1927 specified respective rights and duties of both the Mailo owner and tenant (*kibanja*) holder. The Constitution (1995) and Land Act (1998) provides tenure security for *lawful* or *bonafide* occupants of Mailo land provided they pay to the landlord a *nominal ground rent*⁶ fee. However the definition of rights accorded to *bonafide*⁷ occupants in the Land Act (Cap 227) and all the subsequent amendments, lack legitimacy on part of the land owners. The Land (Amendment) Act 2010 grants statutory protection to the *bonafide* and lawful holder and his or her successors against any arbitrary eviction as long as the prescribed nominal ground rent is paid. However, the nominal ground rent provided for, as opposed to economic rent is largely ignored, creating a land use deadlock between the tenants and the registered land owner, leading to conflicts and many times evictions (MLHUD, 2011).

2.3.3 Native Freehold Tenure

The Freehold tenure system covers about 18.6% of Uganda (MLHUD, 2010). This tenure system was peculiar to the then Kingdoms of Toro and Ankole in Western Uganda and was set up by agreement between the Kingdoms and the British as native freehold. It was also granted as a result of the Toro Agreement of 1900, Ankole Agreement of 1901 and Bunyoro Agreement of 1933. By these agreements the Kingdoms committed themselves to British protection and became part of the Uganda Protectorate. The terms of the tenancy between the tenants on this land and the titleholders were not negotiable and were fixed by law in 1937. The incidents of freehold tenure, which are basically standard, include the conferment of a full power of disposition, and compulsory registration of title in perpetuity. It is clear that public policy regards freehold as the property regime of the future, to the extent that current law provides for conversion from leasehold tenure or customary tenure to freehold. This stipulation is contentious in some areas of the country. Where it has been tested, it has been expensive, as it requires substantial resources for adjudication, consolidation, and registration. In some instances, freehold poses challenges to public regulation since its covenants are not conditional (MLHUD, 2011).

⁶ Nominal ground fee was set at UGX 1,000 (approx. US\$ 0.40) per annum regardless of the size and productivity of land

⁷ Bonafide occupant means a person who before the coming into force of the Constitution had occupied and utilized or developed any land unchallenged by the registered owner or agent of the registered owner for twelve years or more or had been settled on land by the Government or an agent of the Government, which may include a local authority (Section 29 (1) of the Land Act, 1998)

2.3.4 Leasehold Tenure

A leasehold estate is created in land as a result of a contractual agreement between a lesser (landowner) and a lessee that the lessee will enjoy exclusive possession of the land of the lesser for a specified and certain duration in consideration of a cash payment called rent moving from the lessee to the lesser. There are two types of leasehold tenure arrangements, namely, *private leases* given to individual landlords and *official or statutory leases* given to individuals and/or corporate groups under public act terms. Private leases granted by a land owner often require payment of rent, while statutory leases issued by the Uganda Land Commission (ULC) on public land may be accompanied by conditions of land use. Therefore the lesser still holds right to revoke ownership in case of abuse of leasehold conditions. The 1995 Constitution (under Article 237 (5)) provides that any lease, which was granted to a Uganda citizen out of former public land, may be converted into freehold. However, the National Land Policy cautions that leaseholds granted out of former public land without any customary rights should not be converted to freehold, since the land was not customarily owned at the time of grant of the lease and should continue to run as leaseholds, with the citizens of Uganda keeping the reversionary interest (MLHUD, 2011).

2.4 Land Rights in Uganda: Issues at hand

According to UN-Habitat/GLTN (2008:5), *land rights* are socially or legally recognized entitlements to access, use and control areas of land and related natural resources. Secure land rights are a firm springboard for economic, productive activity. They facilitate household income gains, improve food security and act as a safety net in times of hardship. In addition to serving as a basis for secure shelter, for access to services, for civic and political participation, secure land rights can also provide a source of financial security, and a transferable asset which can be sold, rented out, mortgaged, loaned or bequeathed (UN-Habitat/GLTN, 2008:13). Although the importance of secure land rights is obvious, the vast majority of Ugandans may not be able to afford the cost of formally securing land rights under any of the tenure regimes recognized by law. Land rights delivery mechanisms and agents alone, cannot be entrusted to guarantee tenure security to land users, especially the vulnerable. It is, therefore, necessary to put in place a framework that would ensure that land rights held by all Ugandans are fully and effectively enjoyed (MLHUD, 2011). Uganda's divergent system of land tenure and overlapping land rights have impacted negatively on long-term investments in agriculture. Furthermore, many landless potential farmers (especially women) cannot easily access land because of costs, cultural norms and threats imposed by the existing overlapping land rights (GoU, 2010).

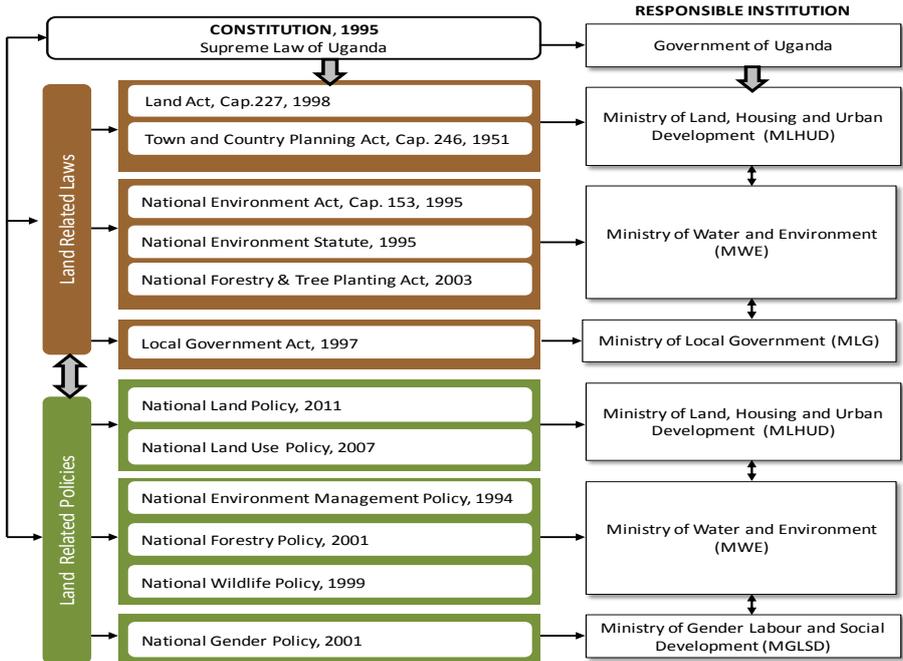
Land rights administration operates within two parallel systems comprising of: the informal customary/traditional systems governed by customs and norms of given communities and the centralized statutory (or state) system governed by written law. The two are not in harmony, thus institutional and systemic conflicts, parallel practice leading to confusion as distinct roles of the various institutions under customary/traditional and statutory institutions are not spelt out. Land rights delivery under customary tenure is based largely on memory and folklore, which though not

less authoritative lacks an institutional framework. Neither of the systems (statutory and traditional) serve the land sector well, making registration of interests slow, expensive, and corruption-prone, often leading to forged titles (MLHUD, 2011). More than 95% of land owners do not have land titles to guarantee their land rights. The problem of accessing land titles is compounded by: bureaucracy, manual operations, corruption, low level of funding to the sector, legal and regulatory constraints, attitude, culture, squatters, historical issues, shortage of relevant skills such as land surveying and many other related problems (GoU, 2010:161). The global land community has come to accept that the way forward to deliver security of tenure is through a continuum of land rights, which allows people to get onto the property ladder. However, a continuum of land rights approach, if implemented at scale, will require the introduction of new forms of land recordation (Zevenbergen, 2011). Zevenbergen proposes a pro-poor land recordation system that would make it possible for different types of land rights to be recorded, and operates within a co-management framework with the community. Zevenbergen points out that the best approach to design the pro-poor land recordation system is to use the community to describe the tenure system and the kinds of evidence of the land rights currently in use. A pro-poor land recordation system could have a major impact on both existing conflicts and in the prevention of new conflicts (Zevenbergen, 2011).

2.5 Legal and Policy Framework for Land Governance in Uganda

Land is at the centre of the constitutional and legal discourse in Uganda, drawing legitimacy from historical as well as contemporary political exigencies. The Government of Uganda has taken a number of reforms to improve land governance as well as clarify on ambiguities that arose in the 1995 Uganda Constitution with regard to the sovereign powers of the State (MLHUD, 2011) after the 1975 Land Decree which had nationalized all land by declaring it public land.

Figure 6: Major Land related Laws and Policies in Line with the 1995 Constitution



Source: Author

2.5.1 The 1995 Constitution and its Provisions on Land

The 1995 Constitution was the first legislation to reform land by reversing the 1975 Land Reform Decree that had nationalized all land by declaring it public land, but did not provide much protection of the user rights of small-scale farmers (Coldham 2000). Article 237(1) of the 1995 Constitution, states that land belongs to the citizens of Uganda, making Uganda the first State in Sub-Saharan Africa to vest its 'radical title' in its citizens (MLHUD, 2011). The Constitution provides that land shall be vested in the citizens in accordance to the four land tenure systems namely, freehold, leasehold, Mailo, and customary. For the first time, customary land tenure became recognized under statutory law. Much as this vestment, resolved an important historical anachronism in the land law namely, the location of radical title, it is not entirely clear how the citizens of Uganda, individually or collectively can; (i) assert residual authority against the State, local authorities, and community governance organs in respect of land which is not owned by anybody or any authority; (ii) exercise the residual sovereignty over all land (MLHUD, 2011). The legal ambiguities created by the 1995 Constitution through vesting land entirely in the citizens of Uganda has sometimes resulted into blocking of public infrastructure development, until the government invokes compulsory acquisition. However, the fact that the government has retained possibilities, stemming from the 1975 Land Decree, to acquire land in the public interest has been criticized (Okuku 2006 cited in Hundsbæk, *et al.*, 2012).

2.5.2 The Land Act, Cap.227, 1998

The 1998 Land Act provides a legal framework for the various land tenure, ownership and management of land; amendment and consolidation of the law relating to tenure, and other associated or incidental matters. In line with the 1995 Constitution, the Land Act creates a fiduciary relationship between the State and citizens of Uganda for the efficient utilization and management of land-based resources (MLHUD, 2011). Although the Land Act recognizes customary rights alongside formal, State-backed property rights (Hundsbæk, *et al.*, 2012), it is not very clear about how customary land should be regulated. This leaves implementation in the hands of different actors at local level (Busingye, 2002:9). Similarly, the 1998 Land Act restores the ownership rights to *Mailo land* – the land tenure system of central and western Uganda with landlords and tenants – but it reduces the landlords' control over the land to a very narrow sense of *de jure* ownership with barely any *de facto* rights (Hundsbæk, *et al.*, 2012).

The Land Act under Section 44 mandates the government or a Local Government to hold land in trust for the people and protect natural lakes, rivers, ground water, natural ponds, natural streams, wetlands, forest reserves, national parks and any other land reserved for ecological and touristic purposes for the common good of the citizens of Uganda. However, some of these lands for instance, wetlands and forests reserves are located on privately owned land owned by citizens. This usually results into conflicts between the State and citizens over conservation and protection of such resources. Under the decentralized land management framework, the Land Act provides for establishment of District Land Boards (DLB) in each district- independent from the Uganda

Land Commission. However, the biggest challenge is that most DLB lack the necessary capacity (human and financial) to undertake implementation activities and to produce the expected results. Equally challenging is how to coordinate the very large number of institutions, which are involved in land matters (Rugadya, 1999).

Despite these provisions, the Land Act has been criticized for not including a provision for joint ownership of land, much advocated for by women's groups, that would strengthen the rights of women, for instance through registering their names on titles and certificates on a par with their husbands (Joireman 2007:476). The debate about the protection of women's rights to land directs attention to the interrelationship between state law and customary practices (Hundsbaek, *et al.*, 2012). The formulation of the 1998 Land Act lacked adequate participation of traditional institutions and the passing of the Land Act was highly politicized. This resulted into its wide rejection by the public.

2.5.3 The National Land Policy, 2011

In 2001, the ministry lands (MLHUD) instituted a multi-sectoral and multi-disciplinary National Land Policy Working Group (NLPWG) to steer the policy making process and deliver for Uganda a systematic framework for articulating the role of land in national development, land ownership, distribution, utilization, alienability, management and control. The key policy issues touch on (i) historical injustices and colonial legacies, (ii) contemporary issues, mainly arising from such legacies; and (iii) land use and land management issues. The vision of the policy is: "to promote sustainable and optimal use of land and land-based resources for transformation of Ugandan society and the economy". The goal of the policy is: "to ensure efficient, equitable and sustainable utilization and management of Uganda's land and land-based resources for poverty reduction, wealth creation and overall socio-economic development (MLHUD, 2001)".

The National Land Policy affirms that land is an important determinant of health and vitality of sectors and subsectors which depend on it for productivity. Among these are agriculture, livestock, energy, minerals, water, wildlife, forestry, and human settlements. Under Policy Statement 145, the Government shall regulate the use of land and water resources for agricultural production aligned with a National Agriculture Policy. The National Land Policy highlights strategies that shall be taken to promote sustainable use and management of water, soil and land resources (MLHUD, 2011). The Policy however heights that inefficient technologies of production, inappropriate land use and management practices have led to severe soil degradation, wastage and pollution of land and water resources in Uganda.

2.5.4 The National Land Use Policy, 2007

Whereas the Uganda Government has put in place several policies, strategies and institutions for managing land utilization, a comprehensive national land use policy has been lacking. This policy addresses issues of agriculture, urbanization and human settlement, industrialization and infrastructure development, environmental management and conservation. The overall goal for the national land use policy is to achieve sustainable and equitable socio-economic development

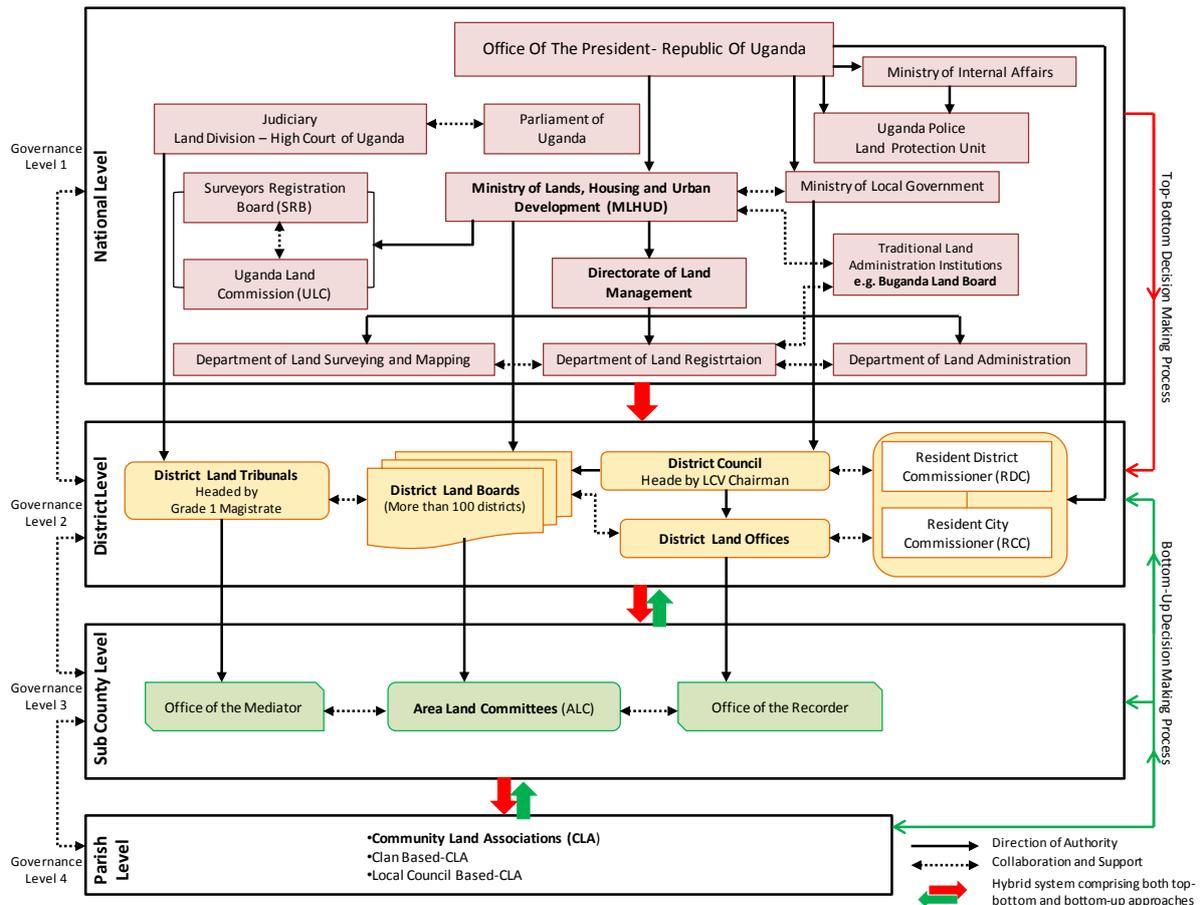
through optimal land management and utilization in Uganda. The specific goals of this policy include ensuring adequately planned land use systems that provide for orderly and sustainable urbanization, industrial and infrastructural development; adopt improved agriculture and other land use systems that will provide lasting benefits for Uganda; to reverse and alleviate adverse environmental effects at local, national, regional and global levels; to promote land use activities that ensure sustainable utilization and management of environmental, natural and cultural resources for national socio-economic development; to ensure planned, environmentally friendly, affordable and well-distributed human settlements for both rural and urban areas; and to update and harmonize all land use policies and laws and strengthen institutional capacity at all levels of the government (MLHUD, 2007).

2.6 Institutional Framework for Land Governance in Uganda

In most African countries centralization occurred either during colonization or during the first decades of independence (Kirk, 1998). The process of devolution of resource management is, in many countries, linked to decentralization programs, which aim at improving the performance of government institutions by giving more authority to lower-level institutions and civil society (Kirk and Ngaido 2001). Uganda introduced the decentralization policy in 1997. Before the introduction of decentralization, land governance was vested under the Ministry of Water, Land and Environment (MWLE). The MWLE had a big mandate governing all natural resources including forests and wetlands as well as promoting sustainable environmental management. In order to improve natural resource governance and bring services closer to the people, the MWLE was subdivided into two separate Ministries namely, Ministry of Lands Housing and Urban Development (MLHUD) and Ministry of Water and Environment (MWE). When the GoU introduced the decentralization policy, land governance services were equally decentralized at district level. The Ministry of Local Government was mandated to implement decentralization process in Uganda.

To-date, decentralized land governance is institutionalized under four main administrative levels namely; national, district, sub-county and parish level. At the national level, the Ministry of Lands, Housing and Urban Development (MLHUD) is responsible for land sector governance. Politically, the MLHUD has one cabinet minister who gives political guidance and direction together with three deputy state ministers for lands, housing and urban development. All the ministers are appointed by the President of the Republic of Uganda. Governance of public land is vested under the Uganda Land Commission (ULC) whose chairperson is also appointed by the President of Uganda. The President also appoints District Resident Commissioners (RDC) and Resident City Commissioners (RCC) to represent him at districts and city administration level respectively. Figure 7 illustrates the current land governance institutional framework in Uganda.

Figure 7: Land Governance Institutional Framework in Uganda



Source: Author

2.6.1 The Ministry of Land, Housing and Urban Development (MLHUD)

At the national level, the ministry of Lands (MLHUD) is responsible for putting in place policies and initiating laws that will ensure sustainable land management and promote sustainable housing for all while fostering orderly urban development in the country. The Directorate of Land Management (DLM) under the MLHUD is particularly responsible for setting and safeguarding standards for land administration, facilitating land transactions, taking into consideration the existing government laws, policies and procedures; providing technical support and supervision and training of lower land management institutions; coordinating the collection, custody and updating of land information on delineated⁸ land in the country; assessment of compensation for land and properties acquired by government; valuation of rental properties to be occupied by government institutions and agencies, determination of premium and ground rent; valuation of leases; and assisting districts to work out meaningful compensation rates (OAG, 2011). The Directorate of Land Management (DLM) also provides technical support to the District Land Offices (DLO) in the processing of upcountry leaseholds and freeholds; processing and granting of consent to transfer properties, checking for

⁸ Delineated land: this is un-surveyed land

compliance with the land laws, regulations and policies; plus the reconstruction, rehabilitation and computerization of land records and cadastral index maps (OAG, 2011:9).

2.6.2 The Role of the Uganda Land Commission (ULC)

The Uganda Land Commission (ULC) is an independent body that works closely with the Ministry of lands (MLHUD) in the administration and management of land. The establishment of the Uganda Land Commission (ULC) is provided for under Article 238 (1) of the 1995 Constitution of Uganda. ULC is mandated to hold and manage land in Uganda which is vested in or acquired by the government in accordance with the Constitution of the Republic of Uganda; and, where applicable, to hold and manage any land acquired by the government abroad. The ULC also procures certificates of title for any land vested in or acquired by the government. ULC consists of a chairperson and four (4) other members appointed by the President of Uganda with approval of Parliament.

2.6.3 The Role of District Land Boards (DLB)

When Uganda adopted the decentralization framework for natural resource management, District Land Boards (DLB) were enacted under Article 240 (1) of the 1995 Constitution and were mandated to hold and allocate land in the district which is not owned by any person or authority, to facilitate the registration and transfer of interests in land and to deal with all other matters connected with land in the district in accordance with laws made by Parliament. District Land Boards are independent of the Uganda Land Commission (ULC) and are not subject to the direction or control of any person or authority other than taking into account national and district council policy on land. The Land Act provides for a minimum membership of five (5) and a maximum of nine (9) members to the District Land Boards who should hold office for a period of five (5) years and may be eligible for reappointment for a further one term. According to Mwebaze and Sebina-Ziwa, (n.d) the actual numbers of District Land Boards however, vary according to the district configuration including the number of sub-counties and town councils. At the time of the enactment of the Land Act in 1998, the districts were fewer and had more sub-counties hence more members. As more and more districts get created⁹, the number of sub-counties reduces and so does the number of members. This explains the variation in total number of members to the boards across the country. The District Council, on recommendation of District Executive Committee (DEC) and with approval of the Minister responsible for lands, appoints members of the DLB. At least one-third of the members of the District Land Board are women (MLHUD, 2010b).

2.6.4 District Land Offices (DLO)

Section 59 (6) of the Land (Amendment) Act of 2004 requires the establishment of District Land Offices (DLO) comprising the offices of the District Physical Planner, the District Land Officer, the District Valuer, the District Surveyor, the District Registrar of Titles and the District Cartographer,

⁹ By 1995, Uganda had 39 districts registered in the constitution. By July 2011, the number of districts created by government had grown to 112. The number is likely to increase by more 25 districts, excluding Kampala Capital City: See New Vision, Uganda's Leading Daily Paper at: <http://www.newvision.co.ug/news/633146-25-more-districts-created.html>, accessed August 6, 2012

which provide technical services to the DLB through its own staff or arrangement of external consultants to facilitate the Board in performance of its functions (OAG, 2011).

2.6.5 District Land Tribunals (DLT)

District Land Tribunal (DLT) is a special court set up to deal with all types of land disputes or disagreements on land in Uganda. The Land Act (1998) provides for setting up of Tribunals at every District and Sub County Level. Under Section 74 (1) and (2) of the Land (Amendment) Act of 2004 the DLT consists of a Chairperson and two (2) other members who shall be persons with knowledge and experience in land matters, appointed by the Chief Justice (CJ) on the advice of the Judicial Service Commission (JSC). The Act provides that the Chairperson of the DLT must be qualified to be a Grade 1 Magistrate. The DLT has the same powers as the Grade I Magistrate's Court and can give an order stopping an action, notice, a command, a decree or a declaration that was made by an official of the District Land Board (DLB), District Land Committee (DLC), Communal Land Associations (CLA) or the Uganda Land Commission (ULC).

However, the Land Tribunal can replace a decision made by any official of the DLB, District Land Committee, Community Land Association or the Uganda Land Commission by making another decision. District Land Tribunals can hear and settle disputes or misunderstandings which result from giving, leasing, re-owning, transferring, or getting land by individuals, the ULC or any other authority dealing in land. The DLT is mandated to settle any disputes or misunderstandings on the amount of compensation to be paid to a former owner of land for land compulsorily taken over by the government. A person who is not satisfied by the decisions of the District Land Tribunal can appeal to the High Court. The Land Act also provides for setting up of Sub-County and Urban Land Tribunals. However, due to lack of funds, the sub-county tribunals were not set up and instead, the LC Courts should be trained to handle land disputes.

2.6.6 Role of Resident District /City Commissioners

Resident District Commissioners (RDC in rural areas) or Resident City Commissioners (RCC in urban areas) are special representatives of the President of Uganda who are appointed directly by the Head of State to monitor government programs and funds and ensure security in their areas of jurisdiction in liaison with other security agencies. Although there is no specific legal framework that mandates RDC/RCC participation in land matters, they play a crucial role in monitoring land development programs, and conflict resolution. Since they are political appointees of the President, they may not necessarily have competence in land issues but their decisions strongly influence the entire decentralized land governance system in Uganda. Their involvement in land sector governance has been often contested by some Members of Parliament and some advocacy NGOs. When contentious land governance issues such as "land grabbing by foreign investors" arise in their areas of jurisdictions, their decisions are likely to be biased in the interest of pleasing their appointing authority. However, in some cases they have been of significant assistance in solving land conflicts at district levels.

2.6.7 Role of Traditional Land Administration Institutions

Traditional Land Administration institutions like the Buganda Land Board (BLB) play a key role in land governance in Uganda. They administer land on behalf of their Kingdoms or Chiefdoms under a traditional governance system. Uganda has several Kingdoms and Chiefdoms but for the purpose of this study, the main focus was on Buganda Kingdom which is the biggest landlord in Lake Victoria Basin. Land for Buganda Kingdom is administered by the Buganda Land Board (BLB). BLB was established to manage that part of estate returned to the King (*Kabaka*) of Buganda under the Traditional Rulers Restitution of Assets and Properties Act. CAP 247 Laws of Uganda. A 350 square mile estate together with the other properties returned to the Kabaka was handed over to Buganda Land Board. Buganda Land Board therefore manages this land by way of encouraging residents to regularize their tenancy under the existing land laws of Uganda. Most of the Mailo land in central Uganda is managed by the BLB on behalf of the Buganda Kingdom. Buganda Land Board “owns” and administers the Kingdom’s land and it processes leasehold titles up to a point of registration by the Registrar of Titles in the MLHUD. Unfortunately there is little coordination between Buganda Land Board (BLB) and the District Land Boards (DLB). BLB has parallel land functions with that of the DLB. Unlike the weaknesses in the functions of DLB, Buganda Land Board has an effective clan, family and individual representatives in all districts it occupies. It oversees communal and ancestral lands as well as ungazetted forest lands, swamps, rivers and small lakes within the monarchical land governance domain.

2.6.8 Area Land Committees (ALC)

Section 64 (1) and (2) of the Land (Amendment) Act of 2010 requires the appointment of a Land Committee at Sub-county or Divisional level consisting of a chairperson and four (4) other members appointed by the District Council (DC) on the advice of the Sub-county or Divisional Council. The Area Land Committee (ALC) assists the District Land Board (DLB) in an advisory capacity on matters relating to land including ascertaining rights in land boundaries and disputes, and performs any other function conferred on it by the law. The records and instruments of the ALC are kept by the chairperson, and the committees may regulate their own procedures (OAG, 2011).

2.7 Issue affecting Good Land Governance in Uganda

Although Uganda has a well-defined set of land governance institutions, there are a number of issues affecting good governance in the land sector. Evidence shows that the public is increasingly losing confidence in land governance institutions. There has been public outcry on delays in processing of land titles, crowded land offices, payment of bribes and the increase in land wrangles and evictions and encroachment on government land (OAG, 2011). The Land Sector Strategic Plan (LSSP, 2001-2011) shows that Uganda’s land sector institutions until recently were designed to serve the interests of a narrow minority of (usually) relatively wealthy registered land owners. Decision making regarding local land resources was undertaken by centralized public bodies and a

lack of transparency permeated the system preventing challenges to decisions. Local communities, although retaining significant power in relation to customary rules of allocation and use, have not been empowered politically or financially to determine critical land sector decisions or to resolve long-standing land problems. The impact of these factors on poverty has yet to be comprehensively assessed, but it is clear that lack of transparency and accountability have contributed to the inequality of land distribution in Uganda (MLHUD, 2001:3).

2.8 Chapter Summary

This chapter explored the dynamics of land tenure and land rights in Uganda. It specifically explored the significance of land in Uganda's development process and the evolution of land tenure systems in Uganda. The chapter also examined the legal and institutional framework for land governance. It concludes by highlighting some of the key issues affecting good land governance in Uganda. Based on literature, the chapter shows that Uganda has well-defined institutions and legislations to promote good land governance. However, most land sector institutions are weak to enforce the existing legislations. Even where decentralized land governance has been promoted, it's not marched with improved service delivery at the local level. Most land administration services like land titling are still centralized under the MLHUD. Decision making process mainly follows a Top-Down approach and where a hybrid system of decision making (involving both Top-Down and Bottom-Up approaches) has been promoted, the local communities lack both technical and financial capacity to make meaningful contributions that can lead to pro-poor land policy and rural development. The chapter points out several other issues such as corruption which is deeply rooted in all land sector institutions in Uganda.

Chapter Three: Water Resources Management in Uganda - Issues and Responses

“Water is the origin of everything” Thales of Milet (624-546 A.D.)-Greek Philosopher

3.1 Overview of Uganda’s Water Resources

Uganda’s fresh water resources comprise of lakes, rivers, streams, dams, wetlands, ground water found in aquifers underground and direct rainfall. The lakes, rivers and wetlands cover about 18% of Uganda’s total surface area. With total renewable water resources estimated at 66 km³ per year corresponding to about 2,800m³ per person per year, Uganda may be considered to be endowed with significant freshwater resources. Lakes, rivers and shallow basins form the main sources of water for human use in Uganda (NWDR, 2006). Lake Victoria is the biggest transboundary water resource that provides water for agriculture and domestic use to the population of the East African countries.

Lake Victoria also supports a livelihood of many people living around it in terms of fishing, tourism, recreation and transport. Lake Victoria waters also support the rapidly growing industrial sector of Uganda. It provides water used as a raw material for industries and hydro electricity generation that runs most Uganda’s industries. The construction of the 250 megawatt Bujagali power station on Victoria Nile is expected to increase supply of reliable electricity for industrialization, lower energy costs, create employment, and improve community and social services of the people (NEMA, 2008). In general, the water sector plays a vital function in enhancing productivity in areas that particularly support exports and domestic revenues. Other freshwater lakes like Albert, Kyoga, George and Edward supply Uganda’s population with water for irrigation and domestic use, fish for domestic and foreign markets, and transport among others.

Table 7: Major Fresh Water Lakes of Uganda

Major Lake	Total Area (Km ²)	Area in Uganda (Km ²)	Height Above Sea Level (m)	Maximum Depth (m)
Victoria	68,457	28,665	1134	82
Albert (Mobutu)	5,335	2,913	621	51
Edward	2,203	645	913	117
Kyoga and Kwanja	2,047	2,047	1,033	7
Salisbury (Bisina)	308	308	1,047	n.a
George	246	246	914	3

Source: NEAP (1992) cited by NEMA (2002) n.a = not available data,

Apart from surface water resources, Uganda is also endowed with considerable amounts of ground water resources. These include aquifer systems and springs. Most of western and central Uganda for instance, lies above the Bunyoro aquifer system, with a depth zone of 110-135m, and water levels ranging from 8-15m depth (NEMA, 2008). Water availability in Uganda varies considerably

across and within regions and seasons. The uneven spatial and temporal distribution of water resources coupled with the increasing water demand (due to rapid population growth¹⁰, urbanization and industrialization, expansion of irrigated agriculture) pose great threats to sustainable management and development of Uganda's fresh water resources. The spatial and temporal variability often renders many parts of the country water stressed over long periods of the year which poses a big challenge to water resource utilization and management. It is estimated that by 2017, Uganda will be a water stressed country (GoU, 2010:318).

The UN Conference on Environment and Development (UNCED) in its chapter 18 of Agenda 21 stresses that the widespread scarcity, gradual destruction and aggravated pollution of freshwater resources in many world regions along with the progressive encroachment of incompatible activities, demand integrated water resources planning and management. Such integration must cover all types of interrelated freshwater bodies, including both surface water and groundwater, and duly consider water quantity and quality aspects. The Multi-Sectoral nature of water resources development in the context of socio-economic development must be recognized, as well as the multi-interest utilization of water resources for water supply and sanitation, agriculture, industry, urban development, hydropower generation, inland fisheries, transportation, recreation, low and flat lands management and other activities (UNCED, 1992).

3.2 Water in Uganda's Development Process

Water is a key strategic resource, vital for sustaining life, promoting development and maintaining the environment. The need for equitable use, integrated and sustainable management of the water resources is increasingly taking center stage in national development processes. The economic activities which rely on water resources include domestic water consumption, livestock watering, industrial and commercial water supply, hydropower generation, irrigated agriculture, marine transport, fisheries, waste discharge, tourism and environmental conservation (GoU, 2010). Water therefore significantly contributes to national socio-economic development and thus poverty eradication. Due to its significant contribution, the water sector has become one of the priority sectors in Uganda, as it directly impacts on the quality of life of the people and overall productivity of the population.

Water supply and sanitation are among the key issues emphasized under the national Poverty Eradication Action Plan (PEAP), which is the key government framework for ensuring poverty eradication through creation of an enabling environment for rapid economic development and social transformation (NWDR, 2006). Government is committed to the provision of safe water within easy reach and to improve sanitation. Progress in the achievement of this goal is measured against a set of performance and outcome indicators. These indicators include access, functionality, per capita investment, sanitation, water quality, equity, hand washing, management

¹⁰ Uganda's population has grown from 9.5 million in 1969 to 30.7 million in 2009. At a 3.2% growth rate per annum, Uganda's population is projected to reach 38 million in 2015.

and gender (number of women on water user committees). The average rural water access as of FY 2008/09 was 63% and has been the same for the previous 3 years. The rate of increase in safe water access was relatively steady between 1991 and 2002 as compared to the period 2002 to 2008. Despite these achievements, a great disparity remains in district specific coverage. Approximately half of the districts are still below the national average of 63%. Furthermore, water coverage in 130 sub-counties out of 1,024 is below 39%. Equally, there is disparity in the functionality of water facilities across districts (GoU, 2010).

3.3 Transboundary Nature of Uganda's Water Resources

More than 98% of Uganda's water resources are transboundary in nature. Major Transboundary water bodies include Lakes Victoria, Albert, Edward and Kyoga and Rivers Kagera, Semliki, Malaba, Sio, Aswa Victoria Nile, Albert Nile and Kyoga Nile (MWE, 2011). These freshwater resources are shared with Uganda's neighboring countries. Among these, Lake Victoria is the largest transboundary inland freshwater resource in the EAC region. Its surface waters are shared by Uganda, Kenya and Tanzania, while Lake Albert and Edward surface waters are shared with Democratic Republic of Congo. Most of these lakes are sources of Uganda's vast rivers which are shared across borders. The Transboundary nature of these resources poses a major challenge for Uganda to achieve maximum resource utilization within its territory without compromising the legitimate rights of her neighbors. As a result, Uganda has been very keen on fostering close collaboration with her neighbors in the joint planning, management and development of the shared water resources (NWDR, 2006). The complexity of the physical, political and human interactions within transboundary basins can make equitable management of their risks, costs and benefits especially challenging (UNEP, 2010).

3.4 Emerging Water Management Issues in Uganda

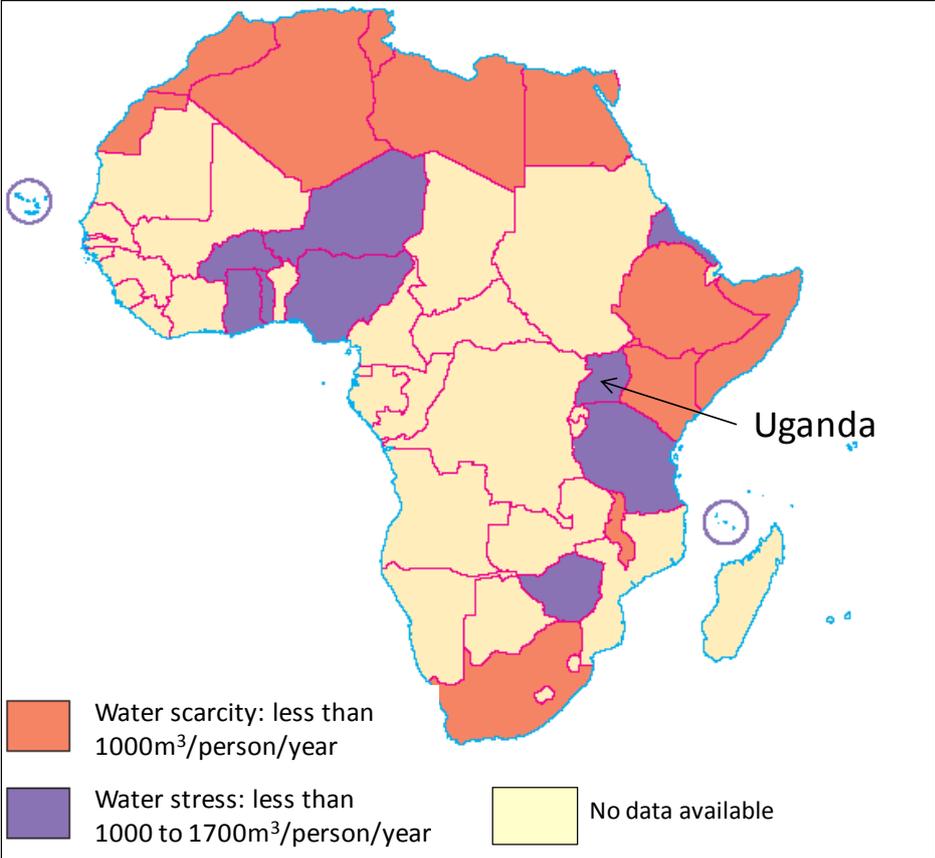
A number of key issues relating to water resources management in Uganda have emerged recently. The water sector is faced with a number of challenges which include; water stress and scarcity arising from increased demand versus available water, rapid population growth, urbanization and industrialization, decline in water quality arising from agricultural and industrial pollution, conflicts as access to and use of scarce water resources increases, gender disparities in decision making process, and corruption in the water sector among others. It has become more evident that these challenges can only be solved through an integrated and holistic approach to land and water governance in Uganda.

3.4.1 Increasing Water Stress and Scarcity

According to UNEP (2002), water stress (less than 1,700m³/capita/yr.) and water scarcity (less than 1,000m³/capita/yr.) is already observed in 14 of the 53 African countries. The growing water stress and scarcity has led to increased competition for access to water resources between user groups and between countries. Similarly the high demand for water is driving unsustainable practices and competition for water resources between sectors, communities, and nations. For

example, in Egypt, 90% of all freshwater resources are derived from river Nile whose source is in Lake Victoria and because the Nile is a shared watercourse with nine other nations, securing access and usage rights has been a contentious process (UNEP, 2002). It's believed that Uganda will experience both water stress and scarcity by the year 2025 (Map 5).

Map 5: Water Scarcity and Stressed Countries by 2025



Source: UNEP (1999) modified by Author

Already the impact of climate change on Uganda’s water resources has accelerated uneven distribution and water stress especially in the semi-arid areas of the country. Prolonged and severe droughts have resulted in rapid decline in water levels in Lake Victoria and other rivers and underground aquifers. This has greatly affected the energy sector, like hydroelectricity power generation-for which Uganda is almost totally dependent on. With over 85% of Uganda’s population using firewood and charcoal, the pressure on both forests and water resources is bound to increase.

3.4.2 Effects of Rapid Population Growth on Water Resources

With annual population growth rate of 3.2%-one of the highest in the world, Uganda’s population has grown rapidly, and in 2009 surpassed 30 million people. This rapid population growth is contributing to the degradation of Uganda’s natural resources, the backbone of Uganda’s economy and household livelihoods (Bremner and Zuehlke, 2009). Although the country is endowed with freshwater resources, the demand for clean and safe water exceeds the available supply. Rural areas which are a home to over 80% of the population still lack access to piped

water. The country's freshwater resources are increasingly under threat due to poor land management practices and pollution especially from agricultural and industrial effluents. The drastic decline in fish stocks due to over fishing and use of poor fishing methods by the dense population on Uganda's major lakes require urgent interventions if poverty alleviation is to be achieved in the country.

3.4.3 Effects of Rapid Urbanization and Industrialization on Water Resources

As Uganda's population continues to grow, the rate of rural-urban migration has rapidly increased. Over 70% of Uganda's population is aged below 30 years and at an annual growth rate of 3.2%, Uganda is one of the countries with the youngest age structure in the world. Uncontrolled rural-urban migration in search for employment, better education and health care as well as infrastructure is responsible for the growing urbanization problems such as slum development, traffic congestion, poor sanitation, increased crime rate and prostitution among other urban challenges. Pollution from increasing urbanization and industrialization is threatening wetland and water resources in Uganda. The quality of surface water has continued to deteriorate due to pollution from domestic and industrial discharges. As the cost of water treatment and purification increases due to pollution, many urban poor cannot afford the water bills hence resorting to unprotected shallow wells and contaminated springs for water. According to NEMA (2002:11), the number of people suffering from persistent diarrhea at Mulago hospital alone had shot up from 9% to 32%. Most patients are children below 3 years coming from Kampala's major slums like Banda, Makerere Kivulu, and Kamwokya among others. An inventory carried out indicated a great number of 'protected' springs which provide water are contaminated with faecal coliform bacteria which are a big threat to public health.

3.4.4 Gender Disparities in Water Management

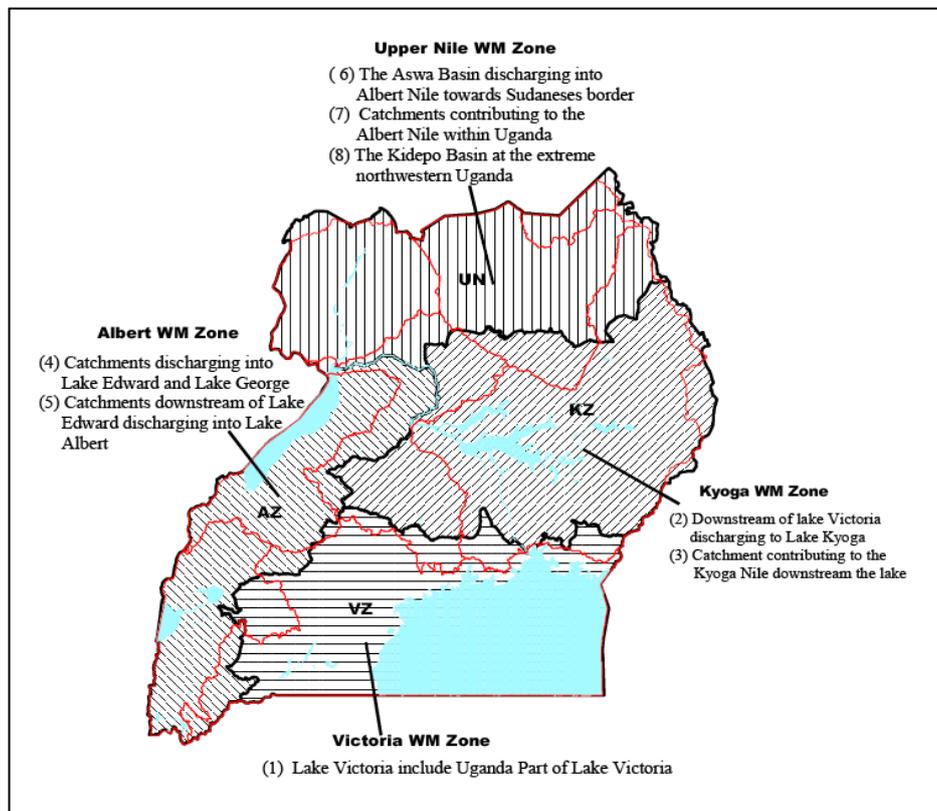
Although women are active in providing and using water it appears that they are far less involved in managing water resources. Despite the gender sensitive policies of the Government of Uganda, women are still not adequately included in the decision-making process although they often have a unique and valuable perspective on the efficient use of water resources (Tindimugaya, 2003). One of the principles that has evolved from the Copenhagen-Dublin-Rio round of conferences is that women should play a central role in the provision, management and safeguarding of water. In most traditional cultures in Uganda, women and children have the obligation of collecting water for domestic use among other household activities. Gender concerns therefore need to be mainstreamed in water resources management activities so that women are involved in decision-making at community level and other higher levels of government (ibid).

3.5 Paradigm Shift in Water Resource Management in Uganda

Following the Water Management Sector reforms, the Ministry of Water and Environment (MWE) subdivided Uganda into four Water Management Zones (WMZs) under the Directorate of Water

Resources Management (DWRM). The WMZs include; Victoria, Albert, Kyoga and Upper Nile Water Management Zone (see Map 6). This paradigm shift in Water Resource Management aims at de-concentration of some of the central level water resources management functions as a way of moving closer to the stakeholders (MWE, 2011).

Map 6: Water Management Zones with Sub-Basins in Uganda



Source: MWE, 2011

3.5.1 De-concentration of Water Resource Management

Water resources management is not decentralized like water supply, and its regulation and allocation is still done by the center (MWE). Therefore, one of the new initiatives being implemented by the MWE is de-concentration of water resources management to regional Water Management Zones (WMZ) and Catchments through creation of Catchment Management Organizations (CMO) through effective participation of local governments, concerned citizens and other actors in the environment and natural resources management (MWE 2011). Currently rural and small town water supply is under the responsibility of local governments - supported by the Directorate of Water Development (DWD) through de-concentrated water units located at the regional level - while large urban water supply systems are under the responsibility of the National Water and Sewerage Corporation (NWSC). While the central government retains the overall responsibility for water resources management, the management of these resources requires actions and decisions to be taken at the most appropriate level. At the same time, management of water resources is inextricably linked with the management of land and vegetation since the later

determines to a larger extent the quality and quantity of the available water resources (Tindimugaya, 2003).

3.5.2 Formation of Water Management Zones in Uganda

The Water Management Zones (WMZs) are based on hydrological (water) basins and this is a regional level Top-Down framework through which water resources will be managed and developed. At the local level, Catchment Management Organizations (CMOs) which are established based on water sub-basins or catchments form parts of WMZs. These CMOs are the local level Bottom-Up frameworks through which stakeholders participate in water resources management (MWE, 2011). MWE recruited, trained and now relocated sufficient staff to the four Water Management Zone offices to establish the basic functionality of these zonal offices. Each office is headed by a team leader who is a Principal Water Resource specialist from the ministry. To further prepare to launch the de-concentrated Integrated Water Resource Management (IWRM) process, MWE carried out a study of alternative institutional arrangements for the effective participation of catchment stakeholders in the IWRM planning process and in each of the WMZs catchment management. This catchment approach is a sound basis for integrating water availability; water demand and water use over time and captures all the spatial and temporal relationships between users and resources. Global experience has demonstrated that one of the important ways to improve the utilization of assets and their sustainability is to effectively involve stakeholders in planning and decision making (World Bank, 2012).

Although Uganda is undertaking significant reforms, a number of challenges are still faced in the water sector. Major challenges include, the need to implement IWRM principles to secure water availability to various competing users including household consumers and all relevant productive activities; address surface and groundwater pollution; increase water for production storage capacity; align policy, legislative and regulatory frameworks to lessons and outcomes of current reforms; adapt sanitation solutions to urban areas faced by rapid population density and rising pollution; reverse the decline in numbers of functioning water supply systems; and rehabilitate and expand water supply systems in small and large towns facing declining water quality and quantity (World Bank, 2012:2). Furthermore, there is an urgent need to control corruption that is deeply rooted in the water sector.

3.6 Secure Water Rights in Uganda: Issues at hand

Water Rights are legal entitlements for the abstraction and /or use of water resources whether surfaces or groundwater (Hodgson, 2004). Water rights include “permits”, “licenses”, “concessions” and other legal instruments through which government authorities enable individuals or groups to abstract water – and, if needed, to build the necessary infrastructure (FAO, 2006). It is widely accepted that, although these rights are created under administrative law, they constitute property rights (Hodgson, 2004). In Uganda, administration of water rights is mainly guided by the 1995 Water Statute and the 1995 Constitution. The water statute (1995) and

its subsequent Water Act (1997) provides for the use, protection and management of water resources and supply; to provide for the constitution of water and sewerage authorities; and to facilitate the devolution of water supply and sewerage undertakings. The 1997 Water Act stipulates that all rights to investigate, control, protect and manage water in Uganda for any use is vested in the Government and shall be exercised by the Minister responsible for water and the Director DWD. Together with other statutory instruments, Uganda provides an elaborate legal and policy framework for water rights administration.

However, water in the various customs of Uganda has always been regarded as a resource to which every person should have unrestricted access. This is especially so for surface waters (Obitre-Gama, 1999). Customary water rights in Uganda are broadly enshrined in a set of unwritten norms, values, cultural beliefs and ethics among various indigenous tribes of Uganda. For instance, in northern Uganda where over 90% of the land is held under customary tenure, water rights administration is managed by customary institutions headed by a council of elders or chiefs who adjudicate in any conflict related to land and water use in the community. General activities such as cleaning the water source were (and still are) done by the entire community that uses the water source. The community sets up its own rules and regulations to separate access to water for domestic purposes and water for animals. In the Buganda culture, cattle had to be taken to separate watering places and so did dogs. If a dog was allowed by its owner to drink water from a well set aside for human consumption, the dog's master committed an offence and he had to dig a new well as a penalty. There was, however, no restriction to watering cattle at rivers or swamps (Obitre-Gama, 1999). Generally speaking, land and water rights in Uganda cannot be easily separated. Even where land is privately owned under freehold, leasehold or Mailo tenure, it's culturally guaranteed that surface water points such as wells and springs are open for communal access, except under a few circumstances where a private piped water system may have been installed.

3.7 Legal and Policy Framework for Water Governance in Uganda

The government of Uganda has put in place several legal and policy provisions that impact on the management of water resources. Just like for the land sector, the 1995 Constitution of Uganda is the supreme law that provides for management of water resources. Objective XXI of the Constitution states that the State shall take all practical measures to promote a good water management system at all levels. Similarly, objective XIII provides for the State to protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda. Although the Constitution does not clearly spell out water ownership and use rights as in the case of land under Article 237, several laws and policies have been set in place to guide water tenure in Uganda.

3.7.1 The National Water Statute (Statute No. 4 of 1995)

For many years, legislation for the regulation of the water sector was inadequate, outmoded and scattered under different laws. Government, therefore, initiated a water sector legislation study which led to the preparation of a new Water Statute which was enacted in November 1995 (MWLE, 1999). The National Water Statute and related regulations provides for the use, protection and management of water resources and supply; and provides for the constitution of water and sewerage authorities and facilitates the devolution of water and sewerage undertakings (MWLE, 1999:7). The objectives of the 1995 Water Statute are; to promote the rational management and use of waters of Uganda; to promote the provision of a clean, safe and sufficient supply of water to domestic purposes to all persons; to allow for the orderly development and use of water resources for purposes other than domestic use, such as, the watering of stock, irrigation and agriculture, industrial, commercial and mining uses, the generation of hydroelectric or geothermal energy, navigation, fishing, preservation of flora and fauna and recreation, in ways which minimize harmful effect to the environment; and to control pollution and to promote the safe storage, treatment, discharge and disposal of waste which may pollute water or otherwise harm the environment and human health.

The general rights to use surface water are limited to domestic use and firefighting once again indicating the importance attached to water supply for domestic purposes. Government's rights in water are further entrenched in the compensation provisions. If damage is caused to land or property of an occupier through the exercise of powers conferred upon authorized persons by the Water Statute, government should compensate all parties having an interest in that land¹¹. However, no compensation can be paid for the taking or use of water on that land unless the effect of such taking or use is to deprive the owner or occupier of the right to use water¹².

3.7.2 National Water & Sewerage Corporation Statute Act, 1995

The 1995 National Water & Sewerage Corporation (NWSC) statute provides for establishment of a corporation that shall operate and provide water and sewerage services in areas entrusted to it under the Water Statute, 1995. The main objectives are: to manage the water resources in ways which are most beneficial to the people of Uganda, to provide water supply services for domestic, stock, horticultural, industrial, environmental and other beneficial uses, to provide sewerage services, in any area in which it may be appointed to do so under the NWSC Statute or the Water Statute 1995, to develop the water and sewerage systems in urban centers and big national institutions throughout the Country¹³. To operationalize the statute, the NWSC Act came into commencement on 22 December 1995 to revise the objectives, powers and structure of the National Water and Sewerage Corporation.

¹¹ Section 2, Water Statute, 1995

¹² Section 33(49), Water Statute, 1995 cited in Obitre-Gama, (1999)

¹³ Chapter 3, National Water Policy, MWLE (1999)

3.7.3 The Water Act, Cap. 152, 1998

The objective of the 1998 Water Act is; to provide for the use, protection and management of water resources and supply; to provide for the constitution of water and sewerage authorities; and to facilitate the devolution of water supply and sewerage undertakings. The Water Act also provides for planning and control of water use¹⁴ - this goes hand in hand with the objective of National Water Policy (1999) which among the objectives is; to manage and develop the water resources of Uganda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations with the full participation of all stakeholders (EAC, 2011a). Contrary to Article 237 (1) of the Constitution that vest land in the citizens of Uganda, Section 5 of the 1998 Water Act states that all rights in water are vested in the government. Section 5 specifically provides that all rights to investigate, control, protect and manage water in Uganda for any use is vested in the government and shall be exercised by the Minister and the director in accordance with this part of the Act¹⁵.

Section 7 of the Act gives the general rights to use water. Under subsection (1), the Water Act gives rights to a person being the occupier of or a resident on any land, where there is a natural source of water, use that water for domestic use, fighting fire or irrigating a subsistence garden. Subsection (2) further grants the occupier of land or resident on land to, with the approval of the authority responsible for the area, use any water under the land occupied by him or her or on which he or she is resident on or any land adjacent to that land. However, the rights under subsections (1) and (2) do not per se authorize a person to construct any works¹⁶.

The Water Act has several accompanying regulations (Water Resources Regulations 1998). Some of the regulations include; The Waste Discharge Regulations (1998), the Water Supply Regulations (1999), and Sewerage Regulations (1999) among others. The Water Resources Regulations (1998) and Water (Waste Discharge) Regulation (1998) prescribe the threshold and procedure for applications to construct any works that use or discharge water under the Water Act. The Water Resources Regulations (1998) authorize the Director of the Water Development to grant surface water and groundwater permits, and to attach conditions to the permits. The Regulations provide for easements, water charges, register of waterworks, and penalties. In practice, citizens make considerable use of water without formal authorization. The Water (Waste Discharge) Regulations (1998) prohibit discharge without a permit issued by the Director of Water Resources¹⁷.

3.7.4 The National Water Policy, 1999

From 1993 to 1994, the Government of Uganda carried out a Water Action Plan (WAP-1995) study through which key water resources management issues were identified, and guided the development of the requisite water sector policy and legislative framework. The 1999 National

¹⁴ Subsection 16,17, 18 and 28 of Water Resources Act 1995

¹⁵ The 1998 Water Act, Cap.152, Section (5)

¹⁶ The 1998 Water Act, Cap.152, Section 7(3)

¹⁷ The Waste Discharge Regulations (1998:37)

Water Policy promotes a new integrated approach to manage the water resources in ways that are sustainable and most beneficial to the people of Uganda. This new approach is based on the continuing recognition of the social value of water, while at the same time giving much more attention to its economic value. Allocation of both water and investments, in water using schemes, aims at achieving the maximum net benefit to Uganda from its water resources now and in the future¹⁸.

The National Water Policy addresses current water management issues and adopts the objectives and strategies formulated under the Water Action Plan (WAP). The policy and strategies have been set against the government's overall goals for social and economic development, as well as the democratic decentralization approach to development. In addition, the policy is in full harmony with the objectives contained in the National Environment Management Statute (1995) and it is equally responsive to the 1995 Constitution of Uganda (MWLE, 1999).

The National Water Policy sets the stage for water resources management and guides development efforts aimed at achieving the maximum net benefit for Uganda from her water resources for the present and future generations while, at the same time promoting the role of private sector, user communities, and sustainability of public facilities and services. The Water Policy (1999), the Water Action Plan (WAP-1995) and the Water Statute (1995) now form a coherent framework for the development, management, and wise-use of the nation's vital water resources and sustainable provision of clean safe water to the citizens (MWLE, 1999). Other supportive policies and legislations to the land and water sector include the 1994 National Environment Management Policy (NEMP), the 1995 National Environment Statute (NES) and the 1997 Local Government Act among others.

3.7.5 The National Environment Management Policy, 1994

The 1994 National Environment Management Policy (NEMP) is as a result of the National Environment Action Plan (NEAP) process. Consequently, the NEMP led to the enactment of the 1995 National Environment Act (Mabasi, 2008). The overall goal of the National Environment Management Policy (NEMP) is "Sustainable social and economic development which maintains or enhances environmental quality and resources productivity on a long term basis that meets the needs of the present and future generations without compromising the ability of future generations to meet their own needs (EAC, 2011a)". The NEMP is the cornerstone of the country's commitment to social and economic development that is environmentally sustainable and which will bring the benefits of a better life to all. One of the key objectives of the policy is to enhance the quality of life of all people in Uganda and promote long-term, sustainable socio-economic development through sound environmental and natural resource management and use (Obitre-Gama, 1999). The Policy also provides for establishment of effective monitoring and evaluation system to assess the impact of different Sectoral policies and actions on the environment, population and the economy (EAC, 2011a).

¹⁸ MWE website, www.mwe.go.ug

3.7.6 The National Environment Statute, 1995

The National Environment Statute (NES) was passed in May, 1995 as the principal law governing environment management in Uganda. The statute is a framework legislation that addresses all known issues of environment management. It provides for sustainable management of the environment and for the establishment of the National Environment Management Authority (NEMA) as a coordinating, monitoring and supervisory body for that purpose (Obitre-Gama, 1999). "Environment" is defined in section 2 as the physical factors of the surroundings of human beings including land and water. Therefore issues relating to water fall within the ambit of the NES (Obitre-Gama, 1999:6). NEMA shall be the principal agency in Uganda for the management of the environment and shall co-ordinate and supervise all activities in the field of the environment¹⁹. The provisions of the NES regarding water are basic provisions regarding water quality standards,²⁰ effluent discharge standards,²¹ the use of lakes and rivers, and the management of river banks and lake shores.²² Section 37 imposes restrictions on the use of wetlands other than traditional uses like fishing. Use of lakes, rivers and wetlands for basic human consumption needs is not restricted. However, use of water for irrigation of subsistence agriculture or livestock would require authorization from NEMA in consultation with the lead agency which in this case is DWD. It was envisaged that specificity would be lent to this framework law through guidelines and regulations, and through sector specific laws like the Water Statute that was subsequently passed (Obitre-Gama, 1999).

3.7.7 The Local Governments Act, (Cap.243 of 1997)

In line with the Constitution, the Local Governments Act (LGA) is an act passed to give effect to the decentralization and devolution of functions, powers and services. The act aims to provide for decentralization at all levels of local governments to ensure good governance and democratic participation in, and control of, decision making by the people. According to the second schedule to the LGA, the Central Government is responsible for water resources and the environment.²³ The District Council is, however, responsible for the provision and maintenance of water supplies in liaison with DWD²⁴. The Urban Councils are responsible for sanitary services and for water supplies outside the jurisdiction of the National Water and Sewerage Corporation.²⁵

The Lower Local Government Councils (sub-county or division) are responsible for the protection and maintenance of local water resources.²⁶ It is the function of the various executive committees, including the parish or village executive committees, to generally monitor projects and other activities undertaken by government, local governments, and Non-Governmental

¹⁹ Part III (6), National Environment Statute, 1995

²⁰ Section 26, National Environment Statute 4 of 1995

²¹ Section 27, National Environment Statute 4 of 1995

²² Section 35 and 36, National Environment Statute 4 of 1995

²³ Part I, Second Schedule, Local Government Act 1 of 1997

²⁴ Part 2, Second Schedule, Local Government Act 1 of 1997

²⁵ Part 3, Second Schedule, Local Government Act 1 of 1997

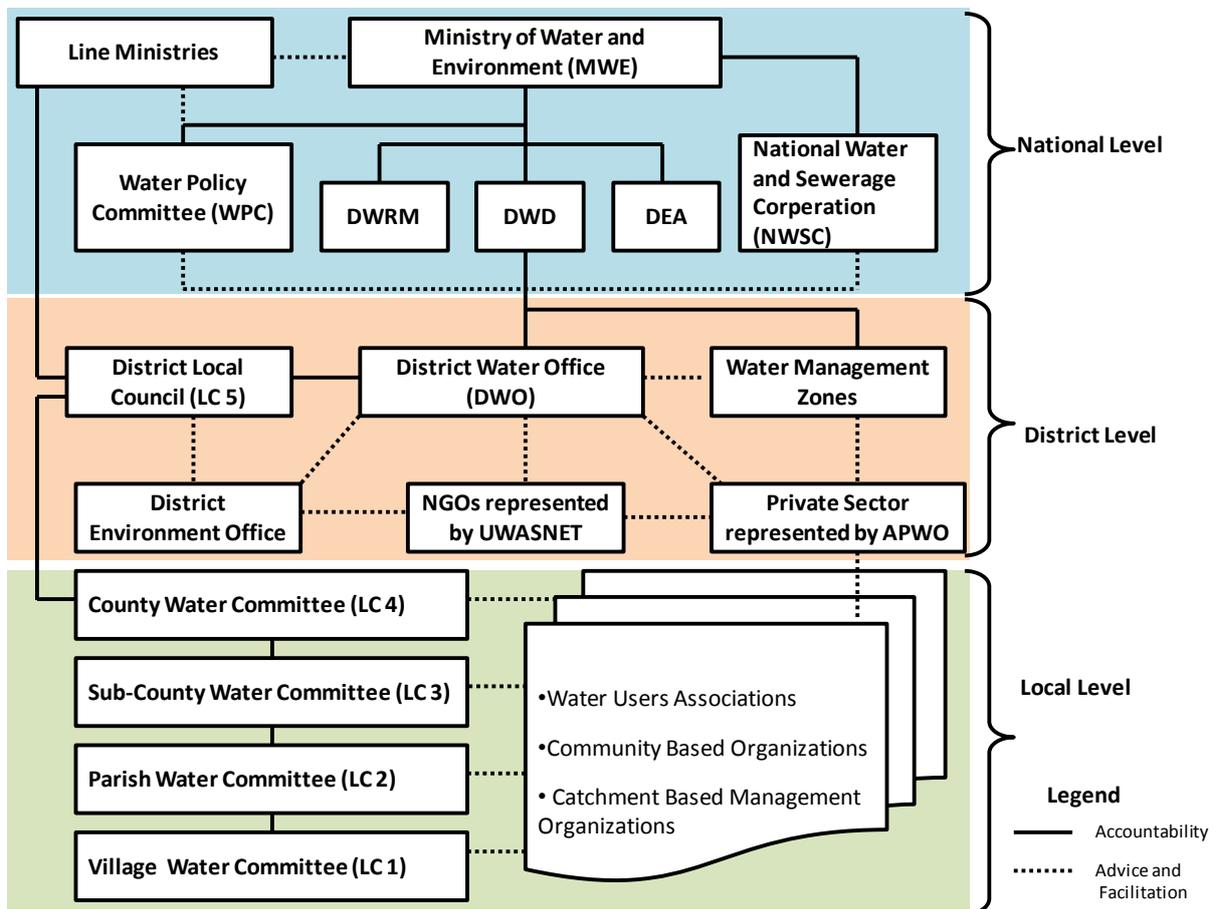
²⁶ Part 4, Second Schedule, Local Government Act 1 of 1997

Organizations (NGOs) in their area.²⁷ According to the second schedule (ss.30, 31) of the LGA-Part 2, the district councils are responsible, subject to article 176(2) of the Constitution and sections 96 and 97 of the Act to provide decentralized services and activities which include but not limited to; land administration, land surveying, physical planning among other. Urban councils are responsible to establish, maintain or control public parks, gardens and recreation grounds on any land vested in the council.

3.8 Institutional Framework for Water Governance in Uganda

Ever since the National Resistance Movement (NRM²⁸) came to power in January 1986, Uganda has taken vigorous reforms in the water sector. The government established a comprehensive institutional framework headed by the Ministry of Water and Environment (MWE) at the national level supported by a number of other institutions at the local level through the decentralization framework.

Figure 8: Institutional Framework for Water Governance in Uganda



Source: Author

²⁷ Section 50(8), Local Government Act, 1997 cited in Obitre-Gama, (1999).

²⁸ NRM is Uganda's ruling political party led by incumbent President Yoweri Kaguta Museveni

3.8.1 The Ministry of Water and Environment (MWE)

The Ministry of Water and Environment (MWE) is specifically responsible for sustainable management of water and environmental resources in Uganda as well as coordinating environment and development programs in Lake Victoria Basin. MWE is responsible for setting national policies and standards, managing and regulating water resources and determining priorities for water development and management. It also monitors and evaluates sector development programs to keep track of their performance, efficiency and effectiveness in service delivery²⁹. In order to achieve its objectives, the ministry closely works with several line ministries such as Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Ministry of Finance, Planning and Economic Development (MFPED), Ministry of Trade, Tourism and Industry (MTTI), Ministry of Education and Sports (MES), Ministry of Health (MoH), Ministry of Energy and Mineral Development (MEMD), Ministry of Gender, Labor and Social Development (MGLSD) and Ministry of Local Government (MLG) among others. The Ministry of Water and Environment (MWE) is composed of three Directorates namely, Directorate of Water Resource Management (DWRM), Directorate of Water Development (DWD) and Directorate of Environmental Affairs (DEA). The ministry (MWE) is supported by semi-autonomous parastatal institutions (*commonly referred to as Lead Agencies*) as well as other line government ministries, NGOs and community level stakeholders (User) committees.

3.8.1.1 Directorate of Water Resources Management (DWRM)

The Directorate of Water Resources Management (DWRM) is responsible for developing and maintaining national water laws, policies and regulations; managing, monitoring and regulation of water resources through issuing water use, abstraction and wastewater discharge permits; Integrated Water Resources Management (IWRM) activities; coordinating Uganda's participation in joint management of transboundary waters resources and peaceful cooperation with Nile Basin riparian countries. The directorate comprises three departments namely Department of Water Resources Monitoring and Assessments, Department of Water Resources Regulation and Department of Water Quality Management.

3.8.1.2 Directorate of Water Development (DWD)

The Directorate of Water Development (DWD) is responsible for providing overall technical oversight for the planning, implementation and supervision of the delivery of urban and rural water and sanitation services across the country, including water for production. DWD is responsible for regulation of provision of water supply and sanitation and the provision of capacity development and other support services to Local Governments, Private Operators and other service providers. DWD comprises three Departments; Rural Water Supply and Sanitation; Urban Water Supply and Sanitation and Water for Production.

²⁹ MWE website, www.mwe.go.ug

3.8.1.3 Directorate of Environmental Affairs (DEA)

The Directorate of Environmental Affairs (DEA) is responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources as well as the restoration of degraded ecosystems and mitigating and adapting to climate change. DEA comprises of four departments, namely; Department of Environmental Support Services (DESS), Forestry Sector Support Department (FSSD), Wetlands Management Department (WMD) and the Department of Meteorology (DOM). DEA works in collaboration with the National Environmental Management Authority (NEMA) and the National Forestry Authority (NFA).

3.8.2 National Water and Sewerage Corporation (NWSC)

National Water and Sewerage Corporation (NWSC) is a utility Parastatal owned 100% by the government of the Republic of Uganda. Formed in 1972 by decree number 34, the Corporation was re-established in 1994 by statute and then in 2000 by the NWSC Act. The mandate given to NWSC by the Government of Uganda is to operate and provide water and sewerage services in areas entrusted to the Corporation (especially urban areas) on a sound, commercial and viable basis. According to the NWSC Customer Service Charter, the Parastatal has been operating for the last 37 years covering 24 large urban centers in Uganda. NWSC coverage include, Kampala, Jinja, Entebbe, Mbarara, Mbale, Soroti, Masaka, Lira, Gulu, Arua, Kabale, Bushenyi, Kasese, Fort Portal, Iganga, Lugazi, Kajjansi, Tororo, Malaba, Kaberamaido, Mukono, Hoima, Masindi, Mubende and is still growing. Besides this expansion, the corporation was voted by the public as Uganda's most transparent company for 2008 and was voted East Africa's most respected public sector company in 2007. NWSC was recognized by Uganda Revenue Authority (URA) as the most compliant taxpayer in 2006/7 under the Electricity, Gas and Water Sector. The Corporation was voted the best employer in the public sector for the years of 2003 and 2005³⁰. Over 90% of NWSC total water supply to urban centers is from Lake Victoria.

3.8.3 Decentralizing Water Governance in Uganda

Decentralization of governance is one of the most ambitious reforms undertaken by Uganda since its independence in 1962 (Kritika, Sohini and Pooja, 2010). A recent study of the extent of decentralization among thirty African countries characterizes Uganda's policy of decentralization as among the most advanced on the continent (Ndegwa, 2002). The study places Uganda on the top spot (next only to South Africa) as a highly decentralized country in Africa. Decentralization of water governance is among the major reform processes promoted by Government of Uganda (GoU) to promote citizen participation and decision making at sub-national level. The sub-national level comprises of districts, counties, sub-counties, parishes and villages. In rural areas, a village is the smallest administrative unit while in urban areas; the smallest unit is a cell/zone.

³⁰ NWSC, Customer Service Charter

3.8.3.1 District Local Councils (DLC)

District Local Governments / Councils have powers to make development plans based on locally determined priorities; raise revenue, including determining and implementing the revenue raising mechanism; make, approve and execute own budgets; alter or create new boundaries within their areas of jurisdiction; appoint statutory commissions, boards and committees for personnel (District Service Commissions), land (District Land Boards), procurement (District and Urban Tender Boards) and accountability (Local Government Public Accounts committees); establish or abolish offices in the public service of a district or urban council as well as hire and manage personnel, and administer own payroll and pension (Mugabi, 2004). Local Governments have the power to approve general administrative plans and financial plans. They extend their services by integrating plans at the lower level of the Local Councils (from LC 1 to LC 4).

3.8.3.2 District Water Office (DWO)

According to the National Water Statute of 1995, every district in Uganda should have a District Water Office (DWO). The DWO acts as a Technical Support Unit that carries out the functions of monitoring and assessment of water resources at the district. Under the decentralization framework the districts, according to the Local Government Act of 1997, are responsible for water supply services in collaboration with the Directorate of Water Development. However, major urban centers are serviced by the National Water and Sewerage Corporation. The major challenge facing decentralization of water governance is the rapid rate at which districts are being created. By the time of decentralization, the number of Uganda's administrative districts was less than 80 but have grown to currently over 112 districts. It's commonly believed that formation of new districts is entirely a political strategy which unfortunately increases public expenditure and results into poor service delivery. The establishment of District Water Offices as required by the National Water Statute of 1995 has barely become impossible to be implemented in every district. Worst still, where District Water Offices exists, their facilitation in terms of funding and capacity building is very weak in many districts of Uganda hence rendering them almost useless.

3.8.4 The Role of Civil Society Organizations (CSOs)

A number of Civil Society Organizations (CSOs) are involved in Uganda's water sector. CSOs include Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs), Faith Based Organizations (FBO), Women and Youth Association, Farmers and Water Users Associations (WUAs), among other voluntary community groups. All CSOs are represented at the national level by the Uganda Water and Sanitation NGO Network (UWASNET). UWASNET has a membership of over 180 active organizations involved in water and sanitations. UWASNET performance report for Financial Year 2010/2011 shows that, 56% of the CSOs work in rural areas, 7% in urban areas while 37% work in both rural and urban areas. The majority (50%) consists of local NGOs, 21% are international NGOs, 18% are faith-based organizations (FBO) and 11% are CBOs (UWASNET, 2011). In order to promote good governance in the water sector, UWASNET developed a three year comprehensive advocacy strategy which seeks to address transparency

and accountability in the water sector as one of the priorities. A summary of five water and sanitation policies was also developed and disseminated to member NGOs (MWE, 2011:217).

3.8.5 The Role Private Sector

Other stakeholders involved in water governance include the private sector. According to UNDP (2007c), during the mid-1990s Uganda went through structural adjustment reforms that emphasized increased Private Sector Participation (PSP). The government's Water, Environment and Sanitation sector was among the first to be affected, and under the reforms, the role of civil servants changed drastically from implementation to statutory. Under the new paradigm shift the civil service was in charge of quality assurance, regulation and contract management, while implementation was farmed out to the private sector. Therefore, private water suppliers entered the mainstream water market. Over time the number of private water suppliers increased, and they now operate under an umbrella body known as the Association of Private Water Operators (APWO). However, the private water operators face a number of challenges whilst providing water services in Uganda. Among the challenges include the poor infrastructure such as unreliable hydro-electricity supply and power outages that affect provision of water services. Most private water operators have to rely on diesel fuel for power generation which increases operational costs and makes service delivery inefficient. Coupled by other institutional challenges APWO acknowledges that governance issues such as political interference, lack of transparency and corruption impact negatively on water provision in Uganda. Besides, the rule that stipulates that water samples must be frequently tested puts strains on the water operators because testing facilities are few and far between (UNDP, 2007c). In order to promote good water governance, the Association of Private Water Operators (APWO) member organizations signed a code of conduct during their Annual General Meeting (AGM) in July 2011. This was a key action, outstanding from the 2009 Good Governance Action Plan (MWE, 2011).

3.9 Issue affecting Good Water Governance in Uganda

Water and sanitation sector, like other sectors in Uganda are affected by governance challenges related to who gets water, when and where. Both urban and rural poor have had challenges accessing water and sanitation services due to corruption related processes. Much as the elite and well-to-do can manoeuvre to access water by all means (including paying bribes to access such services), the poor hardly access any such coping mechanisms. Like many other forms of corruption, corruption in the water sector undermines development of society by contributing to unsustainable development. The poor, and in our case people from rural areas of Uganda are hurt most as corruption creates poverty by reducing effectiveness and efficiency (ACCU, 2008). According to Transparency International's Global Corruption Report (2008), water governance spills across agencies. Water often defies legal and institutional classification, creating a regulatory lacuna and leaving governance dispersed across countries and different agencies with many loopholes to exploit. In Uganda, institutional weaknesses in planning have lead to

predominance of Top-Down planning. Water management is often viewed as largely a technical issue and approached as an engineering challenge (ibid). Consideration of wide stakeholder participation and local citizens to demand for accountability and transparency in decision making within the water sector is still limited in Uganda.

3.10 Chapter Summary

This chapter mainly focused on water resources management in Uganda. It also dealt with key emerging water issues and paradigm shift in the management of water resources in Uganda. The chapter discussed the legal and institutional framework for water governance in the country. In line with the previous chapter on land, it is obvious that land and water resources are closely interlinked although they are governed separately in Uganda. Thus, a right to land does not necessarily guarantee a farmer's right to water. It is obvious that water is necessary for most productive uses of land and at the same time, the use of land has major impacts on both the quality and quantity of water resources. Therefore, decisions regarding the use and allocation of one resource impact directly or indirectly on the use and allocation of the other (Hodgson, 2004:1). From a farmer's point view water is not an issue that can be treated separately from land. Land provides a pathway to water and therefore land without water is of little use (IFAD, 2004). Sustainable resource management can best be attained if Uganda adopts structures and processes that promote joint governance of land and water resources.

Chapter Four:

Land and Water Governance - Theoretical Orientation

“Land and water are not really separate things, but they are separate words, and we perceive through words.”
David Rains Wallace, 1984

4.1 Introduction

Land (and water) is increasingly recognized as an important governance issue. The world today faces many complex challenges, including climate change; rapid urbanization; increased demand for natural resources; food, water and energy insecurity; natural disasters; and violent conflict. Many of these challenges have a clear land dimension: unequal access to land; insecurity of tenure; unsustainable land use; weak institutions for dispute and conflict resolution, etc (FAO, 2009a). In this chapter the major theories and concepts related to land and water governance are explored. The chapter starts by providing a clear understanding of the term “land” and how it’s closely related to water resources. The concept of land management and the notion of institutions are explored.

This chapter is entirely based on an in-depth review of relevant literature about the major theories and concepts upon which this study depends. Literature review is simply a selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfill certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research (Hart, 1998:13). Literature review is a means of locating and summarizing existing studies about a topic. Often these are research studies but may also include conceptual articles or thought pieces that provide a framework for thinking about the topic (Creswell, 2009).

4.2 Land – a resource with multiple definitions

Land is the most important natural resource upon which all human activity is based since time immemorial. It is by far the most important natural resource; and is finite, fragile and non-renewable.’ Land is the source of all material wealth. From it we get everything that we use or value, whether food, clothing, fuel, shelter, metal, or precious stones. We live on the land and from the land, and to the land our bodies or our ashes are committed when we die. The availability of land is the key to human existence, and its distribution and use are of vital importance’ (Simpson 1976:3 cited in Dale *et al.*, 2006:5).

4.2.1 Land- some important definitions

According to Barlowe (1986) land is any portion of the earth over which rights of ownership, stewardship, or use may be exercised, including: the earth’s surface, water covered lands, water and mineral resources, as well as features and resources attached to the earth whether they be natural or artificial. Land in its physical appearance includes the soil and what lies beneath, and its

characteristics, including water conditions (Larson, 1997). UNEP defines land in its physical appearance to include soils, which are most important for agriculture; land cover which is another important component of the environment; and landscapes forming the main basis of human habitat and welfare. In one sense land is something physical, a geological or biological part of the earth (UNEP, 2002).

In many juridical systems the legal profession defines land in a very different way as [...] *an abstract set of property rights that govern the use of the land and the ability of the owner to acquire or dispose of these rights*. These rights may be considered to extend 'from the center of the Earth to the infinite in the sky' and include all things in permanent contact with the soil such as buildings, minerals and vegetation (Dale, Mahoney and McLaren, 2006). In this study the term 'land' is used in a rather broad sense based on Larsson's definition that includes the soil and what lies beneath, and its characteristics, including water conditions (Larsson, 1997:8). Agenda 21 of the United Nations normally defines land as a physical entity- in terms of its topography and spatial nature. It gives a broader integrative view of land to comprise of soils, minerals, water and biota. These components are organized in ecosystems which provide a variety of services essential to the maintenance of the integrity of life-support systems and the productive capacity of the environment (UNCED, 1992). Man's inexorable progress towards development has, however, considerably damaged the land resource base. Since there is a close interface between land and water resources, damage to one resource directly or indirectly impacts on the quality and quantity of the other.

4.2.2 Land Management Concept

The importance of land administration, land reform, land consolidation and land development, which are summarized by the term 'land management', has increased dramatically during the last decade (Deakin *et al.*, 2004). At an international level, the demand for land managers is also increasing. Investigators or credit grantors, as European Union (EU), United Nations (UN), or World Bank (WB) force those countries that are requesting financial aid to fulfill the principles of good governance (Magel, 2000). The concept of land management has had several definitions and interpretations. It encompasses all those activities associated with the management of land as a resource that are required to achieve sustainable development³¹ (Dale, 2000). According to Larsson (1997), the concept

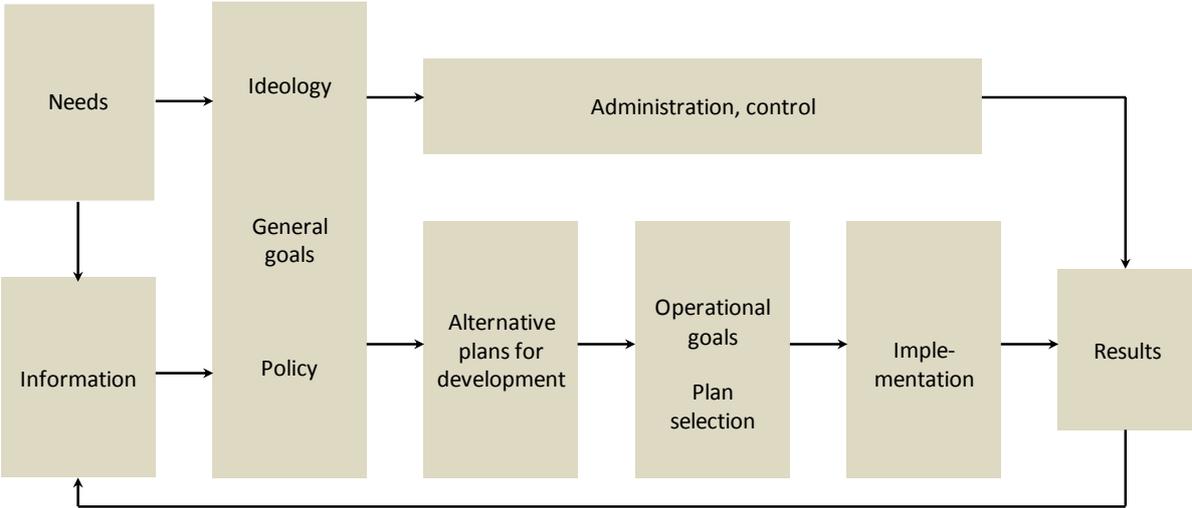
'Land management' is a comprehensive expression for activities aiming to fulfill established goals for the use of certain land resources. These activities may have the purpose of promoting efficient land use within an existing pattern, i.e. they may be mainly of a monitoring, administrative and controlling nature. Alternatively, they may have the main aim of developing the land, by making substantial investment in the land or changing existing land usage (Larsson, 1997:9).

³¹ Sustainable Development refers to Development which meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987:8)

Although this definition is explicit, many scholars still argue that land management, as an area of concern, has no generally accepted international definition, other than that it relates to the management of the land (Munro-Faure, 1996). Munro-Faure asserts that a definition in its own terms does not, however, move us much farther forward. In the broadest sense, in which land is taken to include land covered by water and sea, land management can be seen as virtually all-encompassing. While pointing out the significance of land management, Munro-Faure states that if there is general agreement, it is that land, on the basis of Barlowe’s definition, is of great significance in political, social, economic and environmental terms, at all levels ranging from the individual up to the global. What is true for land must be true for its effective management (Munro-Faure, 1996:1-2).

Many scholars like Deakin *et al.*, (2004) argue that land management always depends on political, legal, social and economic frame conditions of a specific country. Larsson (1997) explains that the starting point of land management is to choose the goals. The goals will determine what should be done. According to Larsson, the goals may have the purpose of promoting efficient land use within an existing pattern, i.e. they may be mainly of a monitoring, administrative and controlling nature. Alternatively, they may have the main aim of developing land by making substantial investment in the land and /or changing existing land usage. Goals should have a background on which they are based. One such principal base is knowledge – information about the relevant existing conditions as well as of the needs and trends for the future. To be able to develop such knowledge into a programme for the handling of the land, there is also a need for an ideology or policy against which the information received can be treated (Larsson, 1997:9).

Figure 9: Phases of a Land Management System



Source: Larsson (1997)

Larsson (1997) concludes by asserting that a well - functioning system of land management should also involve the study and evaluation of the results achieved by the activities, be they monitoring, administration or development. This knowledge should be fed back to the general information and

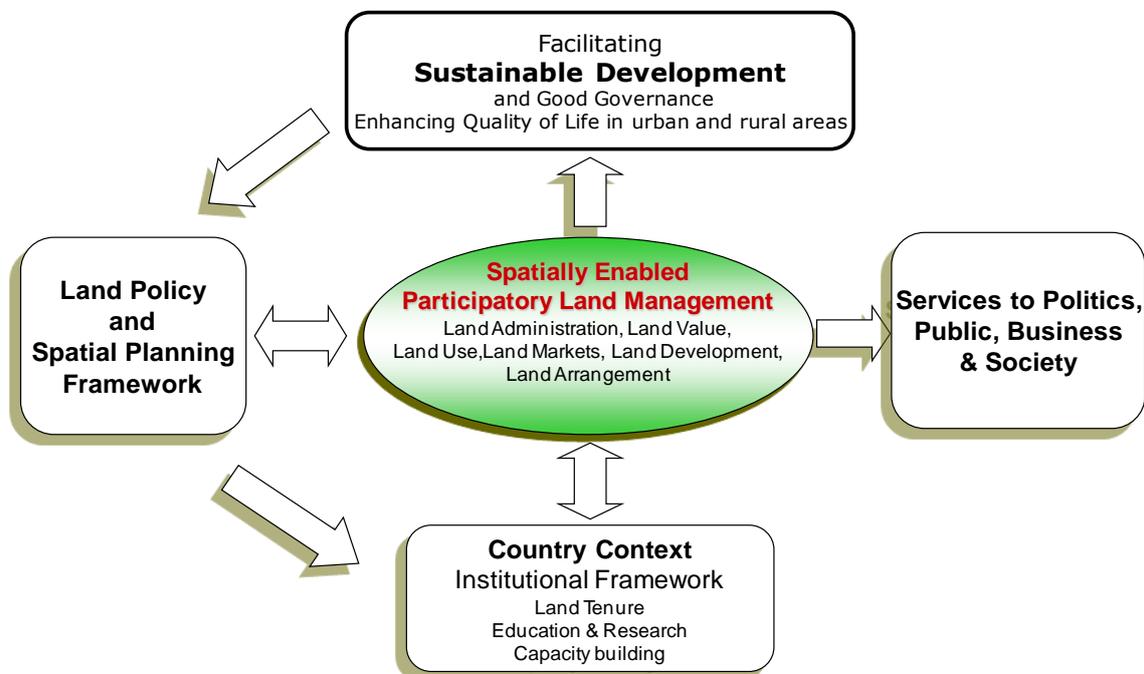
experience base to influence continued management. It is certainly important to include a feedback component into the system.

4.2.3 The Vision for Land Management

According to Magel (2003) the concept of land management is about policies and fields of action for efficient advice, planning, controlling and coordination of all measures and instruments for access, availability, use and change of use, development, allocation and building up of land including buildings for urban, ecological, economic and other purposes in urban and rural areas. The overall vision of land management is to facilitate sustainable development and good governance in order to improve the quality of life in urban and rural areas. However, according the Bathurst Declaration (FIG, 1999), sustainable development is not attainable without sound Spatial Planning, Land Policy and Land Administration and comprehensive Land Management.

In reference to the Land Management Vision, Enemark (2006) explains that the idea is that spatial enabling of land administration systems managing tenure, valuation, planning, and development will allow the information generated by these activities to be much more useful. Achieving of sustainable development goals will be easier to evaluate since adaptability and usability of modern spatial systems will encourage much more information to be collected and made available. Enemark stresses that for governments, building a suitable land policy framework will be assisted by better information chains while the services available to private and public sectors and to community organizations should commensurably improve.

Figure 10: A Common Land Management Vision



Source: Adapted by Magel from Expert Group Meeting 9 – 11 November 2005, University of Melbourne

4.3 Understanding Governance – a fuzzy concept

The term “governance” is not a new concept; it has been used in diverse contexts and applications in international relations, the proper functioning of corporate boards, and the manner in which societies should address environmental problems (de Loë *et al*, 2009). Governance dates back to ancient Greek times, when the term applied to government and simply meant *to steer* (Lautze *et al*, 2011, cited in Jessop, 1998). Towards the end of the twentieth century, the term governance gained the prominent attention of donor agencies, social scientists, philanthropists and civil society. This popularity stems from the fact that it can be applied to a wide range of issues, relationships and institutions involved in the process of managing public and private affairs (UNESCO, 2006).

This term governance and specifically the notion of “good governance” are being increasingly used in development literature but until now there has been no uniform definition; individual contexts and countries produced different interpretations (Magel, 2007). Bang (2003:27) explains that the theory of governance began by being concerned with steering actions of political authorities as they deliberately attempt to shape socio-economic structures and processes. He specifically pointed out that in Germany; this goes by the name ‘*Steuerungstheorie*’ (Mayntz und Scharpf, 1995) which basically means control theory. In other words, governance was used roughly as a synonym of ‘*Politische Steuerung*’ political control. It is hard to say where exactly this particular meaning of the term originated.

4.3.1 Historical Perspectives and Trends of Governance

In connection to political power, the term governance was first traced in the 1989 report of the World Bank titled, “Sub-Saharan Africa, From Crisis to Sustainable Growth” where it was simply defined as ‘the exercise of political power to manage a nation’s affairs’. The political nature of this definition focused mainly on governments; in this report ‘the Bank’ criticized governments and state officials in Africa whom it characterized as serving their own interests without fear of being called to account. The World Bank attributed the weak economic performance in Africa to the failure of public institutions. Since then, different institutions have defined the concept of governance in different ways as shown in Table 8.

In 1992, the World Bank redefined the concept of governance as ‘*the manner in which power is exercised in the management of a country’s political, economic and social resources for development*’. According to this definition, governance encompasses the form of political regime; the process by which authority is exercised in the management of a country’s economic and social resources for development; and the capacity of governments to design, formulate and implement policies and discharge functions (World Bank 1991, 1992, 1994; World Bank 2000a cited in Santiso, 2001). The United Nations Development Program (UNDP, 1997) defined governance [...] as the exercise of political, economic and administrative authority in the management of a country’s affairs at all levels. Governance comprises the complex mechanisms, processes and institutions through which citizens and groups articulate their interests, mediate their differences and exercise

their legal rights and obligations”. It is a system through which actors through institutions and processes, identify, address, and solve common problems (Matz, 2005:342).

Table 8: Typology of Key Governance Definitions

Institution	Year	Governance Definition
World Bank	1989	“Governance is the exercise of political power to manage a nation’s affairs”
World Bank	1992	“Governance is the manner in which power is exercised in the management of a country’s political, economic and social resources for development”
European Commission	1995	“Governance may be defined as the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and a co-operative action may be taken. It includes formal institutions and regimes empowered to enforce compliance as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interests”
UNDP	1997	“Governance can be seen as the exercise of economic, political and administrative authority to manage a country’s affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences”
UN - HABITAT	2002	“Governance is the exercise of political, economic and administrative authority in the management of a country’s affairs at all levels”
OECD	2003	“Governance denotes the use of political authority and exercise of control in a society in relation to the management of its resources for social and economic development. This broad definition encompasses the role of public authorities in establishing the environment in which economic operators function and in determining the distribution of benefits as well as the relationship between the ruler and the ruled”

Source: Author based on Literature

4.3.2 Difference between Governance and Government

Governance is not synonymous with *Government*. In a world where the participation of business and civil society is increasingly the norm, the term “governance” better defines the process by which we collectively solve our problems and meet our society’s needs, while government is rather the instrument we use (OECD, 2001). The term “government” is conventionally used by the Anglo-American political theory to refer to formal institutions of the state, their power, and the processes by which they function to ensure order and protect collective interests (Loë et al, 2009 cited in, Stoker 1998). *Government* refers to the formal institutions of the state. Government makes decisions within specific administrative and legal frameworks and uses public resources in a financially accountable way. Most important, government decisions are backed up by the legitimate hierarchical power of the state.

Governance, on the other hand, involves government plus the looser processes of influencing and negotiating with a range of public and private sector agencies to achieve desired

outcomes. A governance perspective encourages collaboration between the public, private and non-profit sectors to achieve mutual goals (Hambleton, 2004:50). Governance has a complex set of institutions and actors that are drawn from but also beyond government: governance identifies power dependence involved in the relationships between institutions involved in collective action; governance is about autonomous self-governing networks of actors; and governance recognizes capacity to get things done not by the power and authority of the government (Stoker 1998). Therefore, governance involves stronger and new networks between government and non-government actors (Stoker, 1998 cited in John, 2001).

Governance in other words is a more encompassing phenomenon than government. It embraces government institutions, but it also subsumes informal, non-governmental mechanisms whereby those persons and organizations within its purview move ahead, satisfy their needs and fulfill their wants (Rosenau and Otto Czempiel, 1992:4). There are many facets of governance which are of tremendous relevance to the management of natural resources such as land, water, and forests. Governance has become an important component of global environmental discussions and as such, concepts like land and water governance are increasingly becoming an important issue in political decisions. John (2001:17) presents four dimensions of change from local *government* to local *governance* as illustrated in the Table 9.

Table 9: Government and Governance Contrasted

	Government	Governance
Number of Institutions	Few	Many
Bureaucratic Structure	Hierarchical consolidated	Decentred Fragmented
Horizontal Networks	Closed	Extensive
International Networks	Minimal	Extensive
Democratic Linkages	Representative	Representative + new experiments
Policies	Routinized	Innovative learning
Central Government	Direct control	Decentralizes + micro intervention
Leadership	Collegial/clientelist	Mayoral/ charismatic

Source: John (2001)

4.3.3 What constitutes Good Governance

Good Governance is a concept that has come into regular use in political science, public administration and, more particularly, development management. It appears alongside such terms such as democracy, civil society, participation, human rights and sustainable development. In the last decade, it has been closely associated with the public sector reform (Castro-Sardi and Mlikota, 2002). In a well-cited quote, former United Nations Secretary-General Kofi Annan noted that, ‘good governance is perhaps the single most important factor in eradicating poverty and promoting development’ thus, proponents argue, good governance should be at the center of development policy: donors should not only provide positive support for governance reforms in aid-recipient

countries, but also should incentivize better governance by taking into account the quality of governance in decisions about the distribution of foreign assistance (Gisselquist, 2012). Opponents of the good governance agenda, on the other hand, raise strong challenges. Critics, especially in aid-recipient countries, argue that the use of governance criteria in the allocation of foreign aid effectively introduces political conditionalities and imposes Western liberal models of democracy (Nanda 2006; NEPAD 2007:3-4). Yet, despite the importance of the good governance debate to international development policy, there remains considerable confusion over a basic question: what is especially *good* governance (Gisselquist, 2012)?

Table 10: Characteristics of Good Governance

Characteristic	Definition
Participation	Participation by both men and women is a key cornerstone of good governance. Participation could be either direct or through legitimate intermediate institutions or representatives. It is important to point out that representative democracy does not necessarily mean that the concerns of the most vulnerable in society would be taken into consideration in decision making. Participation needs to be informed and organized. This means freedom of association and expression on the one hand and an organized civil society on the other hand.
Rule of law	Good governance requires fair legal frameworks that are enforced impartially. It also requires full protection of human rights, particularly those of minorities. Impartial enforcement of laws requires an independent judiciary and an impartial and incorruptible police force.
Transparency	Transparency means that decisions taken and their enforcement are done in a manner that follows rules and regulations. It also means that information is freely available and directly accessible to those who will be affected by such decisions and their enforcement. It also means that enough information is provided and that it is provided in easily understandable forms and media.
Responsiveness	Good governance requires that institutions and processes try to serve all stakeholders within a reasonable timeframe.
Consensus oriented	There are several actors and as many viewpoints in a given society. Good governance requires mediation of the different interests in society to reach a broad consensus in society on what is in the best interest of the whole community and how this can be achieved. It also requires a broad and long-term perspective on what is needed for sustainable human development and how to achieve the goals of such development. This can only result from an understanding of the historical, cultural and social contexts of a given society or community.
Equity and inclusiveness	A society's wellbeing depends on ensuring that all its members feel that they have a stake in it and do not feel excluded from the mainstream of society. This requires all groups, but particularly the most vulnerable, have opportunities to improve or maintain their wellbeing.
Effectiveness and efficiency	Good governance means that processes and institutions produce results that meet the needs of society while making the best use of resources at their disposal. The concept of efficiency in the context of good governance also covers the sustainable use of natural resources and the protection of the environment.
Accountability	Accountability is a key requirement of good governance. Not only governmental institutions but also the private sector and civil society organizations must be accountable to the public and to their institutional stakeholders. Who is accountable to whom varies depending on whether decisions or actions taken are internal or external to an organization or institution. In general an organization or an institution is accountable to those who will be affected by its decisions or actions. Accountability cannot be enforced without transparency and the rule of law.

Source: Author based on UNESCAP

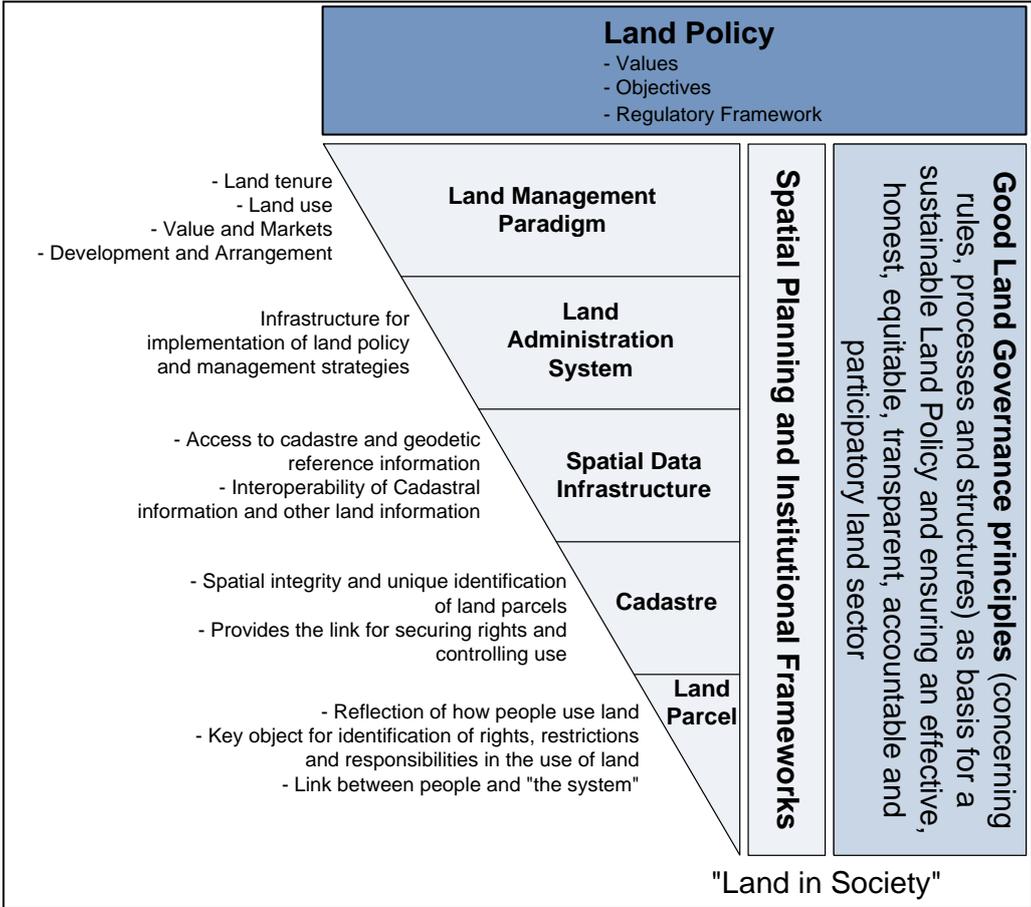
UNESCAP suggests eight major characteristics that define good governance. Good governance is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient,

equitable and inclusive and follows the rule of law (UNESCAP, 2012). These characteristics are defined under Table 10. Good governance ensures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of the society.

4.4 From Land Management to Land Governance

Magel and Franke (2007) maintain that good governance is the central issue that should be considered and implemented by nearly all professionals, particularly those in surveying and without it (good governance) sustainable development is not attainable. In 2007 United Nations FAO highlighted the importance of good governance in land tenure and land administration. FAO (2007) notes that weak governance in land tenure and administration is a common and severe problem that is increasingly recognized. Good governance is the key to equitable and secure access to land, especially for the rural poor, which are crucial factors for reducing poverty and hunger, increasing agricultural productivity and for improving rural conditions. The connection between land management and good land governance can be illustrated the figure 11.

Figure 11: Linking Land Management to Good Land Governance



Source: Magel, Klaus and Espinoza adapted from Enemark 2009

Effective land tenure institutions are needed to administer who has rights to which natural resources for which purposes, for how long, and under what conditions (FAO, 2007). In an

environment characterized by weak governance, it is evident that such land tenure institutions cannot deliver equitable benefits to all citizens. Good governance in land administration aims to protect the property rights of individuals and enterprises as well as of the State by introducing such principles as transparency, accountability, rule of law, equity, participation and effectiveness into land-related public sector management (Zakout, *et al*, 2006).

The need for good governance in land management and administration is obvious all over developing nations. As many countries grapple with an increase in insecurity of tenure, high transaction costs, informal property markets, reduced private sector investment, land grabbing, landlessness and inequitable land distribution, land conflicts, social instability, social exclusion and political instability among others, the demand for good land and water governance has become eminent.

4.4.1 Why Good Governance in the Land Sector?

Land is among the most prone sectors to corruption. Corruption in land is often the culprit or an offspring of the breakdown of a country's overall governance. Recent findings by Transparency International (TI) show that there is a very strong correlation between levels of corruption in the land sector and overall public sector corruption in a country. Findings from a survey done by TI in 2009 points out that the government bodies which oversee the land sector are one of the public entities most plagued by service-level bribery. Among the 69 countries surveyed in the study, more than one out of every 10 people who contacted a land authority reported paying a bribe (FAO and TI, 2011). Corruption in the land sector occurs in a number of dimensions. MacInnes (2012:11) shows for instance, when government officials accept "bribes" from a company in exchange for ignoring or perverting laws, for facilitating swift transactions, giving preferential treatment, being able to act with impunity, and perverting justice. "Bribes" include payments in cash and / or kind, as well as other preferential promises and commitments. These range from government officials acting individually while their colleagues turning a blind eye, to situations where such behavior has been institutionalized across government and regulatory agencies.

To some extent such corruption, especially at the local level, can be due to lack of capacity and oversight from central levels of government. Corruption can also occur when the vested interests are endemic to the point that government officials, politicians and their family members are themselves directly owning or involved in companies which are being given rights to land through leases and acquisitions. In these cases, a physical bribe may not have actually been given or received, but the ownership or connections between the government official and the company means that the official in question personally benefits from the deal, with the relationship kept deliberately secret. Again, this enables companies to receive special treatment, pervert regulations and justice, and ignore negative social, environmental and governance impacts with impunity, as well as promoting nepotism (MacInnes, 2012:11).

4.4.2 The Concept of Land Governance

“Land governance is an interdisciplinary and cross-cutting area mixing technical, natural and social science. Land governance is basically about determining and implementing sustainable land policies and establishing a strong relationship between people and land. Sound land governance is fundamental in achieving sustainable development and poverty reduction and therefore a key component in supporting the global agenda, set by adoption of the MDGs (FIG, 2010). According to FAO (2009a), land governance concerns;

the rules, processes and structures through which decisions are made about access to land and its use, the manner in which the decisions are implemented and enforced, the way that competing interests in land are managed.

Sound land governance is the key to achieve sustainable development and to support the global agenda set by adoption of the Millennium Development Goals (MDGs). Land governance is about the policies, processes and institutions by which land, property and natural resources are managed. This includes decisions on access to land, land rights, land use, and land development. Land governance is basically about determining and implementing sustainable land policies. Land governance covers all activities associated with the management of land and natural resources that are required to fulfill political and social objectives and achieve sustainable development (Enemark, 2009).

Land Governance principles act as a basis for sustainable Land Policy and ensure an effective, honest equitable, transparent accountable and participatory land sector. According to UNDP (2007a), Land Governance includes both formal and informal rules - the latter often evolving and being situation specific - which govern who gets to use which land resources, when, for how long and under what conditions. Land governance encompasses statutory, customary and religious institutions, as well as informal institutions. It includes state structures such as land agencies, courts, and ministries and municipalities responsible for land. It also includes informal land developers and traditional bodies. It covers the legal and policy framework for land, as well as traditional practices governing land transactions, inheritance and dispute resolution. In short, it includes all relevant institutions from the state, civil society and private sectors (FAO, 2009:10).

Kironde (2009) argues that good governance in land matters is of a technical, procedural and political nature. This is because rights over land cannot be separated from civil, political and human rights, and are dependent on political, administrative and professional readiness to ensure fair treatment and equal opportunities for all. In many African countries, control over land rights is a means of accumulating and dispensing political and economic power and privilege through patronage, nepotism and corruption. Addressing these issues is critical to improving governance. There is an emerging recognition that land and water are critical governance issues. IFAD's experience shows that when farmers have secure access to both natural resources (land and water), they invest with confidence in management practices, training, technologies and organizations that enable them to use limited water resources wisely. The growing water crisis can

be addressed comprehensively only if the links between secure access to land and to water are recognized, and the related governance issues are understood (IFAD, 2004). Developing countries especially in Africa therefore need to improve both land and water governance in order to eradicate extreme hunger and poverty.

4.5 Innovative Approaches to Water Management

Water is a precious resource which plays a key role in development of people and economies. Investment in water management directly contributes to livelihood security, improved health, poverty alleviation and reduced societal vulnerability (NEMA 2010). In Africa, it can be a matter of life and death. It can also be a matter of economic survival. Yet it can be both an instrument and a limiting factor in poverty alleviation and economic recovery, lifting people out of the degradation of having to live without access to safe water and sanitation, while at the same time bringing prosperity to all on the continent. A radical change in approach is required if water is not to become a constraint, but an instrument, to socioeconomic development in Africa (World Water Council, 2000 cited in UNEP, 2006). Particularly if inter-generational sustainability requirements are to be met, entirely new water architecture will have to be created. To this end, 'integrated water resource management (IWRM) has emerged as the proposed way forward (Swatuk and Wirkus, 2009:12).

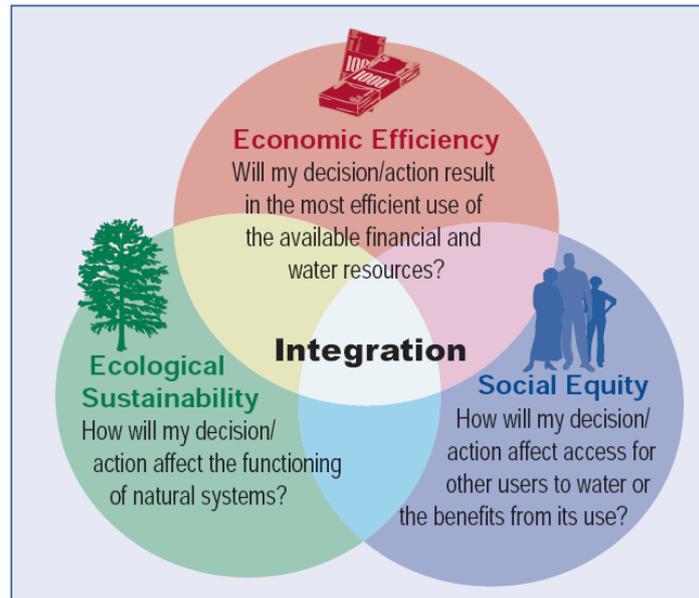
4.5.1 Understanding Integrated Water Resource Management (IWRM)

Throughout the world, Integrated Water Resources Management (IWRM) is being promoted to help better understand, protect and develop water resources in a coordinated fashion, thus contributing to sustainable development. The Global Water Partnership defines IWRM as;

"[...] a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital eco-systems" (Philip *et al.*, 2008:1).

In order to achieve the desired goals of sustainable development, Philip *et al.*, (2008) demonstrate that IWRM must be based on the three core principles of social equity, economic efficiency and ecological sustainability. These three principles are closely linked and the overlap between them means that they are often difficult to separate.

Figure 12: Principles of Integrated Water Resource Management (IWRM)



Source: Philip *et al.*, (2008)

Figure 12 highlights the interaction between the three principles. Achieving efficient, equitable and sustainable water management within the IWRM approach requires a major institutional change. Both Top-Down and Bottom-Up participation of all stakeholders have to be promoted – from the level of the nation down to the level of a village or a municipality or from the level of a catchment or watershed up to the level of a river basin. The principle of subsidiarity, which drives down action to the lowest appropriate level, needs to be observed. Apart from government agencies, private companies, community based organizations which have full participation of women and disadvantaged groups, NGOs and other sections of civil society should be involved. All these organizations and agencies have an important role to play in enhancing access to water, in bringing about a balance between conservation and development, and making water an economic and social good (GWP, 2000:33).

4.5.2 From Integrated Water Resource Management to Water Governance

The development and management of water resources remain at the heart of struggle for sustainable human development, growth and poverty reduction (UNDP, 2007b). The focus is to ensure that the intrinsic linkage between land and water resource management is addressed in order to realize the Millennium Development Goals. Even as we strive towards meeting the MDGs, the water crisis is a problem that in many parts of the world is getting worse. Given the persistence of specific water resource use problems across the world, and the widespread bureaucratic, popular and other social forms of resistance to extensive IWRM innovations, the world's network of experts pronounced the world water crisis to be a 'crisis of governance – not scarcity' (UNDP 2003:370 cited in Swatuk and Wirkus, 2009).

According to UNDP (2004b), the water crisis that humankind is facing today is largely of our own making. The crisis has resulted chiefly not from the natural limitations of the water supply or

the lack of financing and appropriate technologies (though these are serious constraints), but rather from profound failures in water governance, i.e., the ways in which individuals and societies have assigned value to, made decisions about, and managed the water resources available to them. It is crisis with many dimensions, but one of the most important – and neglected – is the governance aspect. The UNDP reaffirmed in its 2006 *Human Development Report* that, “There is more than enough water in the world for domestic purposes, for agriculture and for industry. The problem is that some people—notably the poor—are systematically excluded”, in short, scarcity is manufactured through political processes and institutions that disadvantage the poor (UNDP, 2006:3). It is now incumbent upon all those interested in sustainable water resource allocation, use and management to press for better governance (Swatuk and Wirkus, 2009). The concept of governance as applied to water refers to the capacity of a country to coherently organize the sustainable development of water resources. This definition encompasses both the capacity to design socially acceptable public policy that fosters the sustainable development of water resources and to implement them effectively through the relevant institutions (Pena and Solanes, 2003).

4.6 The Concept of Water Governance

The term “Water Governance” as a new catch-phrase entered the international discourse at the Bonn Freshwater Conference in 2001. The Ministerial declaration of the Bonn Conference emphasized that primary responsibility for ensuring the sustainable and equitable management of water resources rests with the governments. Each country is required to have in place applicable arrangements for the governance of water affairs at all levels and, where appropriate, accelerate water sector reforms. This change in emphasis coincided with a change in approach towards water management. Shortcomings of the old concepts led to a shift stressing the influence of political and institutional factors in water management (Sehring, 2009).

According to UNESCO (2003:371), there is no general definition of Water Governance, partly because the concept is still in the phase of development, but also because it is questionable if a general definition is possible and wishful at all. However, the Global Water Partnership (GWP) formulated a working definition of Water Governance that was later adopted by the United Nations. According to the Global Water Partnership, Water Governance refers;

“[...] to the range of political, social, economic and administrative systems that are in place to develop and manage water resources and the delivery of water services, at different levels of society”(UNESCO, 2003:372).

From this definition, water governances encompass all social, political, and economic organizations, formal and informal rules, and processes that influence water use and water management. It is important to mention that these influences are not only exerted by extended purposive water institutions but by a wider context of society (Sehring, 2005). UNDP expounds that the term water governance encompasses the political, economic and social processes and institutions by which governments, civil society, and the private sector make decisions about how

best to use, develop and manage water resources”(UNDP, 2004b). According to UNDP, water governance is more than national-level water legislation, regulations and institutions, though these are important components. It also refers to the processes that exist to promote popular participation in designing water and sanitation systems. It also refers to where decisions about those systems are made, such as in the capital city or in the community itself, as well as how and by whom. Water governance also refers to social mobilization and other actions designed to promote ownership, co-investment, capacity building, incentives for participation, and willingness to pay for services at the community level (UNDP, 2004b:10).

4.6.1 Why Good Governance in the Water Sector?

The malice of corruption in the water sector has only recently been identified by policy makers and researchers. There is an eminent need to build a deeper understanding of the scope and nature of this problem (Stålgren, 2006). Corruption in the water sector places the lives and livelihoods of billions of people worldwide at significant risk. According to Transparency International’s Global Corruption Report (2008), the water sector is facing a severe crisis, exacerbated by corruption. Corruption in the water sector comes in many different forms and the scope varies substantially across types of water practices, governance structure and the perceptions and norms of actors involved. Typical examples of corruption include falsified meter reading, distorted site selection of boreholes or abstraction points for irrigation, collusion and favoritism in public procurement, and nepotism in the allocation of public offices (Stålgren, 2006). Corruption is at the core of the governance crisis in the water sector. Whereas the scope of corruption varies substantially across the sector and between different countries and governance systems, estimates by the World Bank suggest that 20% to 40% of water sector finances are being lost to dishonest and corrupt practices. The magnitude of this figure is distressing, especially if one considers current efforts to aggregate the US\$ 6.7 billion needed annually to meet the Millennium Development Goals (MDGs) for water and sanitation in Sub-Saharan Africa (Stålgren, 2006).

4.6.2 Rethinking Water Governance: a multi-faceted approach

Water Governance is a multi-faceted and complex issue that involves many actors (Miranda *et al.*, 2011). Different actors have different approaches to water, governance and water governance. Competing approaches on how water should be managed and governed are also heavily influenced by how someone views water in its own right. In the scientific literature as well as among the actors involved in water governance, we find at least four different approaches to water.

- i) Water seen as an economic good or a commodity with an Integrated Water Resource³² Management (IWRM) focus (Economic Approach).
- ii) Water seen as human right and a social good (Human Rights / Social Approach).

³² The term “water” generally refers to the natural element while “water resource” refers to water as an economic good, able to be used for any purpose. As such water is not necessarily a water resource, to the extent that its use is not always economically viable (Braga *et al.*, 2006:1).

- iii) Water seen as a socio-ecological good (Ecological Approach).
- iv) Water seen as a sector in the economy (Sectoral Approach)

4.6.2.1 Economic Approach to Water Governance

At the international arena, water was first explicitly recognized as an economic good at the International Conference on Water and Environment (ICWE) held in Dublin in 1992. The Dublin guiding principles 1 and 4 affirm that fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment and it has an economic value in all its competing uses and should be recognized as an “economic good³³”. Under this approach, water is considered mainly as an economic resource and the management approach falls within the perspective of the integrated management of water resources, taking into account the management of the basin as a whole (upstream and downstream) as well as recycling and reuse of wastewater as an additional source for use in various human activities and ecosystems themselves, all based on economic valuation (Miranda *et al.*, 2011).

Box 3: The Dublin Principles

- Freshwater is a finite and vulnerable resource, essential to sustaining life, development and the environment.
- Water development and management should be based on a Participatory Approach, involving users, planners and policy makers at all levels.
- Women play a central part in the provision, management and safeguarding of water.
- Water has an economic value in all its competing uses and should be recognized as an economic good

In regards to the economic value of water, Fisher and Huber-Lee (2005) in their book titled “*Liquid Assets*” argue that water is not generally scarce in terms of quantity. Water scarcity is a matter of cost and value, not merely quantity. The value of water and its scarcity will be different in different location. From the economic point of view, the provision of water is associated with costs such as extraction, treatment, conveyance, etc. The fact that water is essential for human life makes water and its allocation very important and therefore doesn’t exempt it from the principles of microeconomics. Based on the economic approach to water, Integrated Water Resource Management (IWRM) has become the dominant global approach, supported by multinational business groups and international agencies, particularly lenders like the World Bank and the governments of the north. However critics of IWRM say little has been implemented so far (Miranda *et al.*, 2011:10).

4.6.2.2 Human Rights / Social Approach to Water Governance

According to Action Contre la Faim (ACF), the debate on the right to water and sanitation has been moving on since the early 1970s and access to water for personal and domestic use is now recognized as a basic human right and not simply as a need. Indeed, since the Mar del Plata Conference (1977) during which it was declared that “*all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking*

³³ The Dublin Statement on Water and Sustainable Development, Accessed on 24 July 2012 from: <http://www.wmo.int/pages/prog/hwrp/documents/english/icwedece.html>

water in quantities and of a quality equal to their basic needs”, the international community as a whole has become very active in issues related to the management of water and a fortiori to the right to water (ACF, 2009). ACF shows that a number of high-level conferences have made significant advances in furthering the links between the access to water and sanitation, and human rights - gradually calling attention to the duties and responsibilities of governments and other actors concerned. The adoption of the Millennium Development Goals (MDGs) in 2000 and particularly Goal No. 7, which aims “*to reduce by half the proportion of people without sustainable access to safe drinking water by 2015*”, has been an important catalyst in generating debate on the right to water and sanitation. However, despite the political strength of this declaration, from a human rights perspective, the Goals fall short of full realization of human rights. It is important to note that, even if the Millennium Development Goal targets were to be achieved in full, in 2015 more than 800 million people would still be without access to water and 1.8 billion people without basic sanitation.

In 2002, the UN Committee on Economic, Social and Cultural Rights (CESCR) raised to prominence the right to water. Framed under General Comment No. 15, which clarified the scope of the right to water and sanitation, this non-legally binding document was nonetheless designed to promote binding and enforceable rights under national laws, as a step towards filling the gaps in water services. Whilst this goal is generally accepted, responses to the General Comment have been widely divergent, and discussion of the human right to water mixed with argument over private *versus* public services and pro and anti - ‘commodification’ of water (ODI, 2004). According to the Swiss Agency for Development and Cooperation (SDC, 2008), the right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for essential personal and domestic uses. One of the key questions is how a human rights based approach can provide a tool for strengthening development cooperation. According to SDC (2006) Human Rights Policy, a Human Rights Based approach includes three key elements³⁴.

- i) Use the standards of the international human rights framework as a reference;
- ii) Integrate key human rights principles, namely non-discrimination and equality, inclusive participation, accountability and the rule of law, universality and indivisibility into strategies, programs and policies;
- iii) Empower right-holders to claim their rights and strengthen capacities of duty-bearers to meet their obligations.

The right to water is a precondition to the enjoyment of other human rights or is narrowly linked to them. For example: the right to food, the right life and right to health, the right to education, etc.

³⁴ There is no overall definition of a Human Rights Based approach to development: The definition used in SDC’s policy paper draws upon the UN common understanding.

Table 11: Milestones in Human Rights to Water (1977-2011)

Period	Main Event affirming the Right to Water
March 1977	Mar del Plata UN Water Conference
December 1979	Convention on the Elimination of All Forms of Discrimination Against Women
November 1989	Convention on the Rights of the Child
January 1992	International Conference on Water and Sustainable Development. Dublin Conference
June 1992	United Nations Conference on Environment and Development. Rio Summit
September 1994	United Nations International Conference on Population and Development
December 1999	UN General Assembly Resolution A/Res/54/175 “The Right to Development”
September 2002	World Summit on Sustainable Development
November 2002	General Comment No. 15. The right to water
July 2005	Draft Guidelines for the Realization of the Right to Drinking Water and Sanitation. E/CN.4/Sub.2/2005/25
November 2006	Human Rights Council Decision 2/104
December 2006	Convention on the Rights of Persons with Disabilities
August 2007	Report of the United Nations High Commissioner for Human Rights on the scope and content of the relevant human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments
March 2008	Human Rights Council Resolution 7/22
October 2009	Human Rights Council Resolution 12/8
July 2010	UN General Assembly Resolution A/RES/64/292
September 2010	Human Rights Council Resolution A/HRC/RES/15/9
April 2011	Human Rights Council Resolution A/HRC/RES/16/2

Source: Author, compiled from UNW-DPAC³⁵

Unsafe water consumption and absence of basic sanitation and hygiene undermines the efforts to assure basic nutrition and consequently the right to food. It is globally acknowledged that unsafe water, inadequate sanitation and the lack of basic hygiene are the main causes of infant mortality worldwide, and in many developing countries, fetching water is the task of women and girls. Where there is no easy access to water, girls have to help their mothers with this heavy task and often refrain from going to school as a result. In other cases, the lack of adequate sanitation facilities in schools poses a particular risk to the dignity and safety of girls and encourages parents to prohibit the schooling of their daughters. Moreover, water borne diseases often mean that children do not go to school (SDC, 2008:3-4). The concept of water as a human right is expected to change the traditional market-based approach (i.e. the economic approach) since it assumes all human beings have equal rights in egalitarian conditions and without discrimination, and it provides those who are

³⁵ UN-Water Decade Programme on Advocacy and Communication: Accessed on 26 February 2013 from: http://www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_milestones.pdf

lacking safe drinking water and sanitation with legal recourse as well as a stronger position for negotiation with the water sector, water boards, regulatory institutions as well as with (economically and politically) stronger water users in the market (Miranda *et al.*, 2011).

However, SDC (2008) warns that the 'human right to water' should be distinguished from 'water rights', which generally refer to accessing or using water for specific purposes. The law concerning water rights may define who can use water and under which circumstances. Individuals may be allocated water rights, which may consist of a predefined amount of water for specific purposes under specific conditions (e.g. farmers have water rights for irrigation purposes). However, these two types of rights are interlinked. The right to water focuses on the amount of water necessary for basic human needs (between 20 to 100 liters per person per day), which is a small amount in comparison to the large quantities used for economic purposes (1500 liters per person per day in France, for example).

4.6.2.3 Ecological Approach to Water Governance

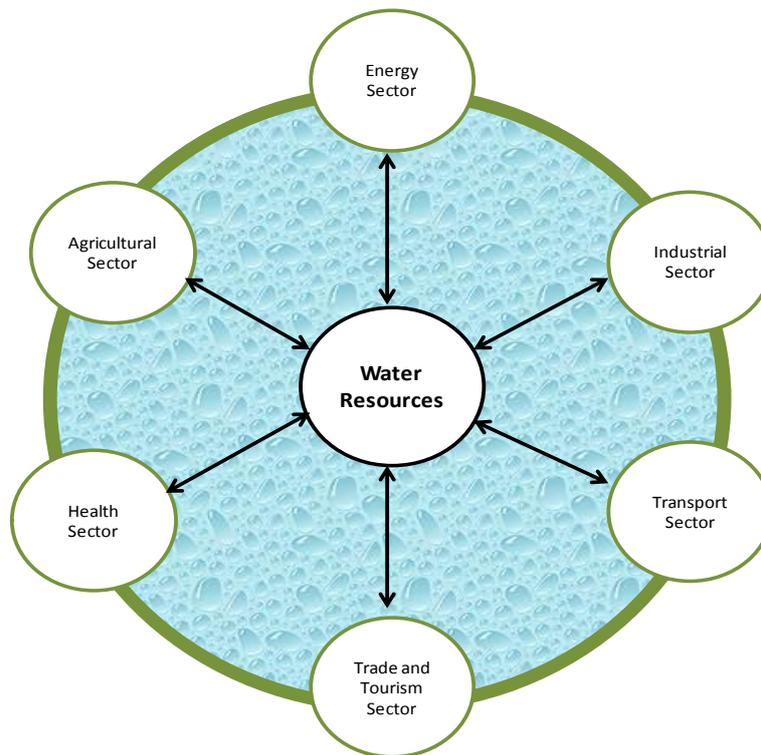
Before discussing how the ecological concept applies to water governance, it is paramount to give a definition of the Ecological Approach. An ecological approach allows a simple scientific basis for environmental actions to be presented to the community and natural ecosystem needs. The ecological approach maximizes the use of natural resources without causing damage to an ecosystem. This approach is unique in considering the needs of an ecosystem for its own survival before the needs of the people. Ultimately this is for the sake of the long-term benefit of local people and the wider community (Milner, n.d). The key components of this approach are usually ecologist, environmentalist, community activists and peasant and indigenous movements that fall outside of the public and dominant discourse, but that represent a strong trend in the populations in the south. One of the key consequences of this approach is that not only the voice of human beings should be acknowledged in the decision making process, but also the voice of nature (Miranda *et al.*, 2011). Neglecting the limits of nature can lead to the increased risk of an epidemic or natural disaster (earthquake, flood, drought, etc.) or just the exhaustion of the resources which are necessary for any development process (Miranda, 2004).

According to Acreman (2004) the Dublin Conference of 1991 concluded that 'since water sustains all life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. At the UNCED Conference itself, it was agreed that 'in developing and using water resources priority has to be given to the satisfaction of basic needs and the safeguarding of ecosystems' (Agenda 21, Chapter 18, Section 18.8). Thus whilst people need access to water directly to drink, irrigate crops or run industrial processes, providing water to the environment means using water indirectly for people. The declaration from the Second World Water Forum in The Hague 2000 highlighted the need to ensure the integrity of ecosystems through sustainable water resources management. The World Summit on Sustainable Development held in August 2002 in Johannesburg, reinforced the role of environmental protection as a key pillar of sustainable development.

4.6.2.4 Sectoral Approach to Water Governance

The traditional perspective is to view water as a sector, emphasizing downstream water supply and sanitation, as well as the concerns of industrial users. Upstream resource abstraction is partially included, yet usually for supply of municipal needs. The water sector thus defined traditionally excludes on-farm agricultural productivity; institutional support and non-consumptive resource management e.g. flood controls and dedicated hydropower that is not used for water provision (Adams *et al.*, 2009:32 cited in Miranda *et al.*, 2011). This concept is gradually yielding the need for Inter-Sectoral management based either on watershed management, or on the management of water as a natural resource.

Figure 13: Inter-Sectoral Linkage to Water Resources



Source: Author

4.7 Land and Water Governance Nexus

In many developing and developed countries, the core challenge in integrated land and water resource management is that of *Land and Water Governance*, particularly in relation to deeper political and societal foundations on which day-to-day decisions and courses of action rest (Calder, 2005). Recognition of land and water objectives at different levels in society and the governance challenges they face at the different levels may assist the task of identifying the correct 'entry points' on which to initiate actions (ibid).

Box 4: Definition of Land and Water Governance

In a land and water context, governance is considered as *the range of political, social, economic and administrative systems that are in place to develop and manage land and water resources, and the delivery of water services at different levels of the society.*

Source: Calder, 2005

4.8 Understanding Institutions: an incoherent concept

The concept of institutions itself has not yet found a coherent definition across the various users of the term. Hall and Taylor (1994) recently surveyed the varied meanings of institutions in political science, and Powell and DiMaggio (1991) compared the concepts of institutions in economics with those in sociology (Nelson and Sampat, 2001). Matsuert (2002) defines *institutions as organizations or sets of conventions, policies or legislations which regularize social behavior.* Institutions can operate at all levels from the household to the international arena and in all spheres from the most private to the most public. On the other hand, Greif (2006:30) refers institutions as ‘*a system of rules, beliefs, norms and organizations that together generate the regularity of (social) behavior.*’

Greif's definition differs from North (1990) who simply describes institutions as the ‘*rule of game*’ compared to a football analogy, in which the football game is the institution and the players are the organizations. Building on the “rules of the game” metaphor, Douglass North, a Nobel laureate in economics, more formally defines institutions as ‘*the humanly devised constraints that structure human interaction*’ (Peng, 2011:33). The interpretation derived from North's definition is that in order for organizations to perform efficiently and effectively, they need to conform to a system of rules. Somehow, North and Greif share similar understandings although Greif tries to provide a more unified and comprehensive understanding of the notion of institutions. The definition of institutions “as the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction” (North 1990) is restrictive because it considers only the rules and the norms of interaction but not the role of decision-makers themselves. In this research, we define institutions to encompass both rules and organizations that shape and enforce these rules (Kirk, 1999).

4.8.1 Formal and Informal Institutions

According to Peng (2011), an institutional framework is made up of both the formal and informal institutions governing individual and firm behavior. Formal and informal institutions are supported by three pillars; regulatory, normative, and cognitive pillar.

Table 12: Dimensions of Institutions

Degree of Formality	Examples	Supportive Pillars
Formal Institutions	<ul style="list-style-type: none">• Laws• Regulations• Rules	<ul style="list-style-type: none">• Regulatory (Coercive)
Informal Institutions	<ul style="list-style-type: none">• Norms• Cultures• Ethics	<ul style="list-style-type: none">• Normative• Cognitive

Source: Peng (2011)

Formal Institutions include laws, regulations, and rules. Their primary supportive pillar, the *regulatory pillar* is the coercive power of governments. On the other hand, **Informal Institutions** include norms, cultures and ethics. Informal institutions are supported by two pillars: normative and cognitive. The *normative pillar* refers to how values, beliefs, and actions of the relevant players- collectively known as norms-influence the behavior of focal individuals and firms. The *cognitive pillar* is the second support for informal institutions. It refers to the internalized (or taken-for-granted) values and beliefs that guide individual and firm behavior (Peng, 2011:33). Peng summarizes these institutional dimensions as shown in the box below. The World Trade Organization (WTO, 2004) shows that the notion of an institution embodies several elements: formal and informal rules of behavior, ways and means of enforcing these rules, procedures for mediation of conflicts, sanctions in the case of breach of the rules, and organizations supporting market transactions.

4.8.2 Institutions versus Organizations

While many scholars have equated institutions to organizations, it should be noted that not all institutions are organizations. Organizations are relatively definable; they consist of identifiable structures and members (Nutt-Powell *et al.*, 1978). The members in the organization operate within a set of formal and informal rules and regulations, beliefs, norms and customs that govern organization behavior within the institution. It's important to note that not all institutions are homogenous. Acemoglu and Robinson (2008) explain that institutions can also differ between societies because of their formal methods of collective decision-making (democracy versus dictatorship) or because of their economic institutions (security of property rights, entry barriers, the set of contracts available to businessmen). They may also differ because a given set of formal institutions are expected to and do function differently; for example, they may differ between two societies that are democratic because the distribution of political power lies with different groups or social classes, or because in one society, democracy is expected to collapse while in the other it is consolidated. The incoherence in understanding the notion of institutions is just one of the many constraints that deter effective governance of land and water resources.

4.8.3 Institutions and Good Governance

According to the World Bank (2000), building effective and accountable public institutions is arguably the core challenge for sustainable poverty reduction. Dysfunctional and ineffective public institutions are increasingly seen to be at the heart of the economic development challenge. Misguided resource allocation, excessive government interventions, and arbitrariness and corruption have deterred private sector investment and slowed growth and poverty reduction efforts in numerous settings (World Bank, 2000). In light of these problems, it's important to strengthen formal and informal institutions based on internationally agreed upon principles of good governance.

4.9 Chapter Summary

This chapter explored the main theories and concepts related to land and water governance used in this study. It started by exploring the different understandings pinned to land as a natural resource. Upon this understanding, the concept of land management is defined and the vision for land management is explained. Before understanding the concept of land governance, it was imperative to define the term governance and how it has evolved over time. Although governance is synonymous to government, the difference between these two terms government and governance were explained. The chapter explains the concept of land governance and why good governance in the land sector matters. The chapter also dealt with innovative approaches in water management and how the concept of Integrated Water Resource Management (IWRM) applies in the water discourse. It was imperative to explore the reasons behind the paradigm shift from IWRM to water governance and why in particular good governance is necessary in the water sector. Different approaches to water governance were explored. The chapter ends by exploring the notion of institutions and why good governance matters in building strong institutions. This chapter based on theoretical orientation leads into the conceptual framework which is discussed in the next chapter

Chapter Five: From Theoretical Orientation to Conceptual Framework

5.1 Introduction to Conceptual Framework

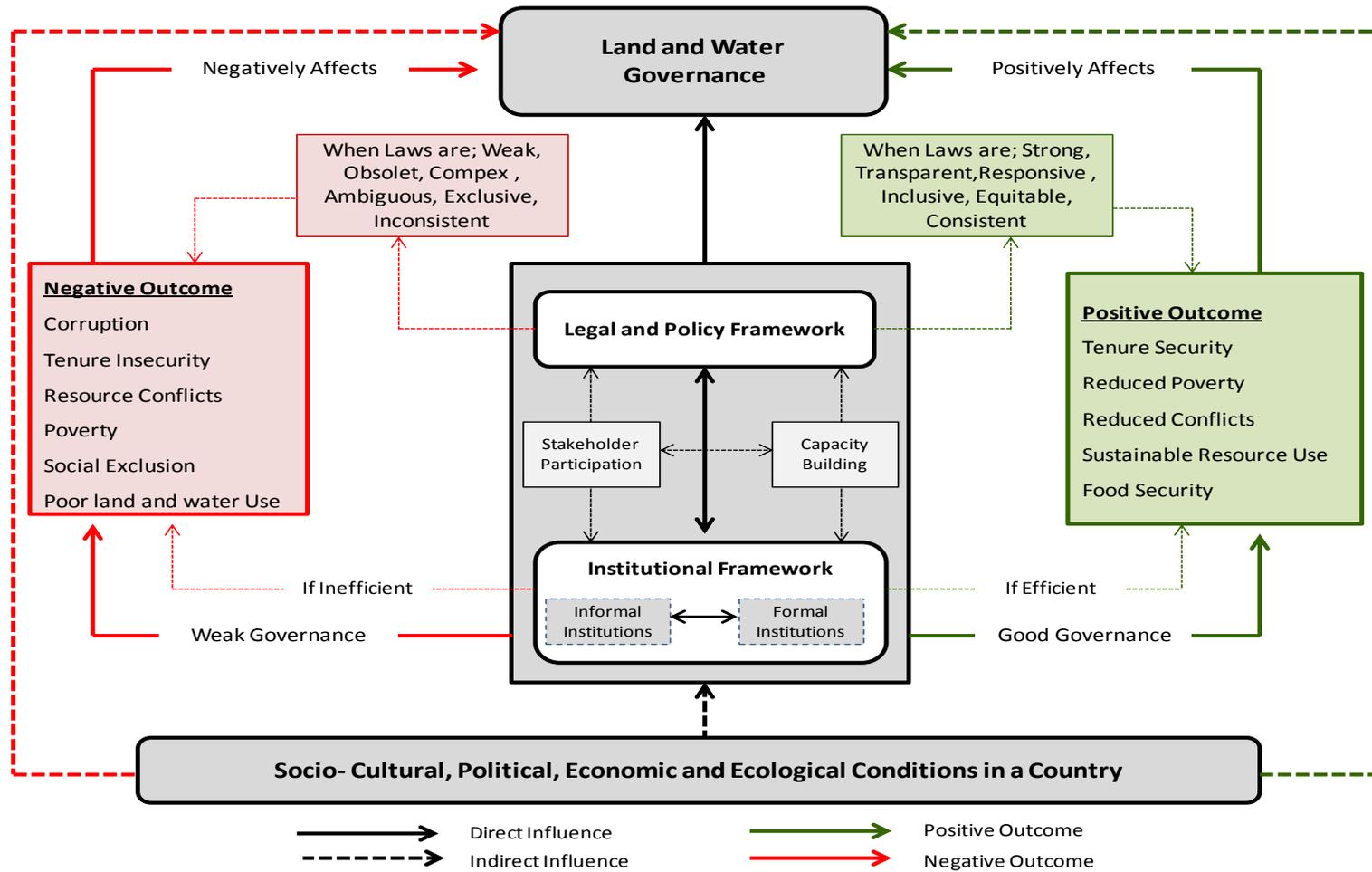
A conceptual framework is an interconnected set of ideas (theories) about how a particular phenomenon functions or is related to its parts. The framework serves as the basis for understanding the causal or correlational patterns of interconnections across events, ideas, observations, concepts, knowledge, interpretations and other components of experience (Svinicki, 2010). The conceptual framework provides a clear concept of the areas in which meaningful relationships are likely to exist, thus it works in relation with your goals to justify the study (Cargan, 2007). Nye and Berardo (1966) believe that the construction of the conceptual framework is a useful device for creating more refined definitions of important concepts, organizing and testing possible propositions and fostering theoretically meaningful research.

Conceptual frameworks facilitate the research by providing an array of ideas. It is important that not only are the substantive results of research understood, but also that the essential concepts used are understood by those who are using the results (Nye and Berardo, 1966). The conceptual framework is therefore derived from the theoretical framework and relates concepts and theories to the specific research problem. Just like Sriraman and English (2010) point out, the conceptual framework presents an argument that the concepts chosen for investigation (for instance; institutions, land and water governance) and any anticipated relationship among them are appropriate and useful given the research problem under investigation. Therefore, the conceptual framework should come before the decision of how to collect the data - the method for carrying out the research (Cargan, 2007).

5.2 Conceptualizing the Role of Institutions in Land and Water Governance

The purpose of the conceptual framework in this study is to identify and categorize a range of factors that affect land and water governance in general. The underlying factors influencing land and water governance may be similar to most African countries still grappling with good governance. Whether land and water governance will be effective (good) or ineffective (weak) depends on a combination of factors including; (a) the socio-cultural, political, economic and ecological conditions in a country, (b) the institutional framework through which formal and informal rules, processes and structures operate; (c) the legal and policy framework that guides the operations of different institutions and stakeholders in land and water governance. The generalized conceptual model in Figure 13 illustrates the causal patterns between these factors and how they can either positively or negatively affect land and water governance.

Figure 14: Generalized Conceptual Framework for Land and Water Governance



Source: Author

5.2.1 Socio-cultural, political, economic and ecological conditions

The generalized conceptual model is based on the assumption that depending on socio-cultural, political, economic and ecological conditions in the country, both formal and informal institutions can positively or negatively affect land and water governance. Socio-cultural factors like tribe, language, norms and taboos, religion and spirituality, etc. may influence the way people think about management of land and water resources. Socio-cultural practices are embedded in different customary laws that guide ownership and use rights of shared resources for the benefit of the present and future generation.

Political conditions in the country can similarly affect governance of land and water resources in different ways. Most land and water issues are highly political in nature. Political decisions guide the allocation of land and water rights and strongly influence the nature of institutions in which power is vested over governance of resources. Institutions require political support in financing and facilitating land and water governance interventions, e.g. building land and water administration systems to improve access and ownership rights require financial support from the State as well the Private Sector through Public Private Partnerships (PPP). Political will is necessary in designing pro-poor land and water legislations as well as supporting the institutions that are responsible for policy and legal implementation. For instance, the Parliament which is the legislative arm of government should be at the forefront for advocating gender-sensitive and pro-poor land and water laws that protect the rights of all citizens. Most land and water governance rules and regulations stem from environmental laws and international treaties that aim at ecological sustainability. For instance, most African governments are signatories to international environmental laws and conventions but still lack the political-will to implement them.

5.2.2 Conceptualized Institutional Framework

According to the conceptual framework, the key to effective land and water governance is an efficient and effective institutional arrangement established on principles of good governance. Institutional arrangements to determine rights and access to rural resources, such as land, water, trees, and wildlife, are a prerequisite to agricultural development and food security (Zevenbergen, 2002). In the previous chapter, institutions were defined as a system of rules, beliefs, norms and organizations that together generate the regularity of (social) behavior' (Grief, 2006:30). Institutions play an important role in the coordination of collective action, since they reduce uncertainty and promote coordination and cooperation among individuals. Institutions structure action and give guidance for patterns of action. Institutional arrangements shape social interactions and the way a resource is accessed and used (Kramm and Wirkus, 2010). When it comes to issues of resource access and sustainable utilization, property rights have been given attention.

Property rights involve a social relationship between the right holder, other people, and an institution to back up the claim (Meinzen-Dick, 2000:7). The backing institutions can be derived from statutory law or customary law. Property-holders can assert their rights, with the associated enforcement mechanism, to control access. These different rights deriving from State law, customary law or convention are not equivalent (Kramm and Wirkus, 2010). Property rights are meant here as institutions by which individuals appropriate over certain goods they possess. “Appropriation is a function of legal rules, organizational forms, enforcement, and norms of behavior – that is, the institutional framework (North 1990 cited in Zevenbergen, 2002). Many of the property rights laws of such successful Western countries have been adopted by other countries, but with very different results. Although the rules are the same, the enforcement mechanisms, the way enforcement occurs, the norms of behavior, and the subjective models of the actors are not (Zevenbergen, 2002). For example, in Uganda most property rights laws are obsolete and lack clear enforcement mechanisms.

Property right laws such as the 1924 Registration of Titles Act Cap 230, 1906 Successions Act Cap 162 and 1949 Rent Restrictions Act Cap 231 stem from British colonial laws. The Government of Uganda is gradually amending these laws to cope with the current socio-economic and political conditions in the country. In this study, it's conceptualized that institutions cannot perform alone without a supportive legal and policy framework.

5.2.3 The Legal and Policy Framework

Legislation is crucial to policy implementation. Legislation forms the basis of institutional jurisdictions, water (and land) rights, regulation and conflict resolution. As a result of often out-of-date and poorly harmonized legislation, institutions overlap and often have conflicting interests and responsibilities, as a result rights and regulations are difficult if not impossible to enforce (AfDB, 2010). The primary tool to implement policy is legislation, i.e. laws and regulations. Legislation, like policy, can exist at different levels of government: local/municipal, regional/provincial, national and international. As a general matter, laws set forth rights, obligations and institutional roles (FAO, 2009b). In the context of land and water sector, governance assessment should include an assessment of the state of legislation and the degree to which it supports policy and provides for clear separation of stakeholder roles and responsibilities. Sector policies provide for an enabling environment for sector development, forming the foundation for good governance. As such, they should incorporate principles of good governance throughout. In assessing (land and water) sector governance, a review of the process taken to develop policy and to gain acceptance across sector stakeholders is useful in understanding its context and determining chances for its implementation in practice (FAO, 2009b:14).

A well-designed, participatory and inclusive legal framework creates an enabling environment for effective resources management. Good legal frameworks may enhance peaceful cooperation and resource-sharing, allowing governments to implement and enforce policies to

ensure sustainable and equitable allocation of resources. Good legislation should at least reflect three main characteristics. It should be clear; it must provide secure rights; and it must contain enforcement mechanisms that are both adequate and feasible and that can be applied consistently (FAO, 2009b). Generally speaking, a good legal and institutional framework is the foundation for good land and water governance. An inclusive legal framework enhances stakeholder participation which is a key to promoting good land and water governance.

5.2.4 Conceptualizing Governance

It's widely believed that good governance in the society enhances security of tenure, improves food security, and promotes sustainable resource (land and water) utilization. Security of tenure to a rural farmer enhances their confidence to invest in land and water management systems which ultimately improves production and income. Good governance is a key to poverty reduction. Good governance in land and water administration helps to reduce resource conflicts which ultimately positively affect land and water governance in the country. However, weak governance in the land and water sector exacerbates corruption. Corruption is the most prevalent and insidious product of poor governance and flourishes when there is lack of transparency, weak institutions, low accountability and excessive discretionary power (AfDB, 2010). Corruption is at the core of the land and water sector. It comes in many forms: petty corruption (e.g. bribes or kick backs), fraud, collusion (e.g. between bidders of a tender), coercion (e.g. threats), obstruction and undue influence (nepotism and favors). Weak governance leads to tenure insecurity.

Insecurity of tenure is, often associated with the marginalization of individuals and communities, to a concomitant lack of investment, and as a contributory factor to petty criminality (Zevenbergen, 2002). Weak governance results in increased land and water conflicts, poverty, unsustainable resource use and exclusion of weak groups (especially women and minorities) from accessing equal land and water rights. Weak governance flourishes where the laws are weak, obsolete, complex and ambiguous. The weak laws and policies only serve the needs of a few wealthy bureaucrats while excluding the poor from equal justice. Weak governance gives room for bad investments. Many developing countries whose investment laws and policies are weak have become a major target for land grabbers. Behind most large scale land acquisitions is a hidden grab for water. Reversing this negative trend require strong institutional reforms. Institutional reforms for land and water governance can only be effective if land and water [...] laws and regulations are freely available, well drafted in a participatory, transparent manner, responsive and consistent and able to be enforced by the government and citizens (FAO, 2007).

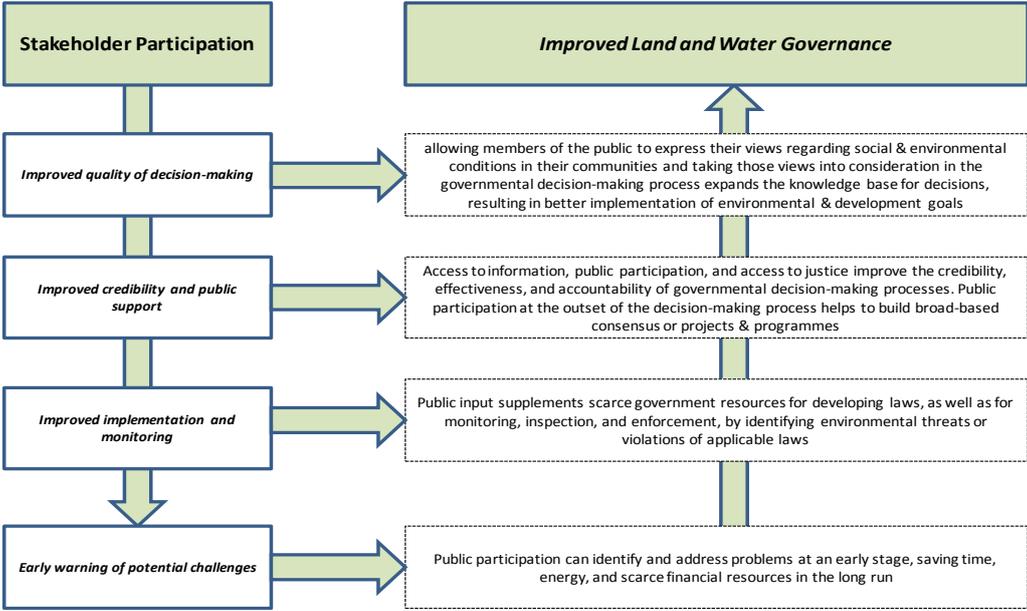
5.2.5 Conceptualizing Stakeholder Participation

Another key to successful reforms in land and water governance is the need for stakeholder participation. Freeman (1984) defines stakeholders as "any group or individual who can affect or is affected by the achievement of the organization objectives". Stakeholders may include policy makers, donors, NGOs, Media, land and water users, traditional and religious leaders as well as

the private sector, professional bodies and academia among others. In order to enhance collective decision-making and deliberative democracy, identification of stakeholders in participatory planning, development, implementation and monitoring must be done across all levels of governance (i.e. local, sub-national, national and regional level).

The success of cooperative management strategies – incorporating inputs from a broad range of sectors and stakeholders – to a large degree hinges on providing the public effective means of participating in land/water management decisions directly affecting them (Earle and Malzbender, 2006). Participatory approaches enhance project quality, ownership and sustainability. Civil society represents a resource which can assist governments in the formulation and implementation of projects, policies, regulations and laws around managing (land and water) resources (Bruch, 2000). Stakeholder participation is highly complex, and that there is a need to go beyond looking at mere inclusion in decision-making structures and to examine in depth the nuances of stakeholder roles, resources and relationships, in particular power relations (Tapela, 2006). The major challenge is to manage and integrate the relationships and interests of various stakeholders.

Figure 15: Benefits of Stakeholder Participation in Land and Water Governance



Source: Author based on literature

Reed (2008) identified a number of key features of best practice for stakeholder participation that have emerged from a Grounded Theory Analysis of the literature. Among the key features he points out include the need for stakeholder participation to be underpinned by a philosophy that emphasizes empowerment, equity, trust, and learning. Where relevant, stakeholder participation should be considered as early as possible and throughout the process. Relevant stakeholders need to be analyzed and represented systematically based on agreed upon clear objectives for the participatory process among all stakeholders at the outset. Participatory methods should be

selected and tailored to the decision-making context, considering the objectives, type of participants and appropriate level of engagement while integrating both local and scientific knowledge.

Stakeholder participation can be costly and cumbersome, however for sustainability of land and water governance reforms, financial support and technical assistance should be core for reform process. The responsibility of financing land and water resource infrastructure and management normally rests with local or national governments. This requires firm political will and commitment to ensure that the desired land and water governance reforms receive necessary support from all policy makers. Policy implementers can respond to policy change in different ways: they can implement reforms fully or partly, or if internal reform resistance is high in combination with lax monitoring from policy-making levels, they can ignore new policies altogether. It is clear, then, that policy-makers should not escape the responsibility of implementation and making sure that adequate capacities and financing is available for effective implementation (UNDP, 2003).

5.2.6 Capacity Building for Land and Water Governance

Just like stakeholder participation, sufficient capacity to deliver services is crucial for the success of land and water governance reforms. By capacity, the focus is on the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainably (UNDP, 1998). Capacity building requires adequate investment in human resources in training and staff development, and in technical resources, including buildings and equipment. Adequate human resources means that staff have the appropriate skills and competences, and have access to relevant training. This should be at all levels in the organization (FAO, 2007). Political will is essential in allocating the necessary resources for capacity building. Financial and technical assistance required by governments towards capacity building can be mobilized through effective participation of development partners, private sector and civil society in land and water management. It's conceptualized that capacity building should be prioritized in both legal and institutional reform processes.

5.3 Chapter Summary

The conceptual framework summarizes the major factors that positively or negatively affect land and water governance. The framework is based on the concept of 'good' governance, legal and institutional arrangements that exist in Uganda. It's conceptualized that if the legal and institutional framework is efficient, then positive outcomes like tenure security, reduced conflicts and poverty among others can be attained in the society. However inefficient institutional arrangement coupled by weak laws and all other symptoms of weak governance will only result into negative outcomes such as corruption, tenure insecurity, social exclusion, etc in the society. The conceptual framework defined the relationships between the different factors and set the direction for the research methodology.

Chapter Six: Research Methodology and Approach

6.1 Introduction

Research methodology is the overall approach to the research process, from the theoretical underpinning to the collection and analysis of the data (Hussey and Hussey, 1997:54). Different scientific disciplines have developed different research methods and practices to scientific research which must follow particular guidelines and procedures to ensure the quality of research results (Bukvova, 2009). This chapter discusses the different research methods and approaches used to collect and analyze data about land and water governance in Uganda.

6.2 Choice of Research Methodology

Broadly speaking, there are two types of research methodologies: *Qualitative* and *Quantitative*. Since the early 1980s, there has been underlying presuppositions about qualitative and quantitative research strategies as though one or the others should eventually emerge as superior. Newman and Benz (1998) reject this dichotomy assumed by the debate. They assert that all behavioral research is made up of a combination of qualitative and quantitative constructs. Even Eisner (1991) cautions against the dichotomy and asserts that qualitative and quantitative research can be combined. Selecting an appropriate research methodology depends on the nature of the research problem or the issue being addressed. Given that the nature of this study aims at improving land and water governance through critically analyzing the role of institutions in secure land and water rights in Uganda, a qualitative research methodology was chosen to be the most appropriate. The qualitative approach was however supplemented by quantitative methods as discussed below.

6.2.1 Qualitative Research Method: adoption and application

Qualitative research is a means of exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell, 2009). It involves an *interpretive and naturalistic* approach: "This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them (Denzin and Lincoln, 2000). Qualitative data is *non-quantifiable* but rather depends a lot on people's perceptions, views and feelings about a particular problem being investigated. It is concerned with qualitative phenomenon involving *quality*. It is non-numerical, descriptive, applies reasoning and uses words. Generally, its aim is to get the meaning, feeling and describe the situation (Rajasekar, *et al.*, 2006). The core problem of this study lies on investigating the causes of weak governance in Uganda's land and water sector. Understanding and addressing the nature of this research problem required a qualitative approach. Qualitative techniques helped in exploring and understanding the institutional challenges that impede good land and water governance and critically examined how local people ascribe to land and water

governance crisis in Uganda. A range of qualitative techniques were used to obtain useful information for this study. The techniques included *key informant interviews* with participants from land and water institutions, *household survey* and *participant observation* about land and water problems in the case study area. Emphasis was given to understand participants' social and historical contexts and experiences such as the reform process in Uganda's land and water sector. Directly observed land and water use practices were documented through *photography*. Photographs can be seen as a form of storytelling, exploring narrative, and providing insight into memory and identity construction. The photographs do not stand alone but are used in conjunction with interview (Harrison, 2002). In summary, the qualitative research design gave the foundation upon which the research questions for this study were answered.

6.2.2 Quantitative Research Design: supplementary approach

During the process of qualitative data collection, some important quantitative data was obtained to supplement the narrative and expository facts about the research problem. Unlike qualitative data which is unquantifiable, quantitative research design is based on measurement of *quantity* or *amount* (Rajasekar, *et al.*, 2006). In this study, some quantitative data such as, average household size, average income, average size of land among others were collected to supplement the qualitative livelihood analysis of participants in the case study area.

6.3 Selection of Case Study

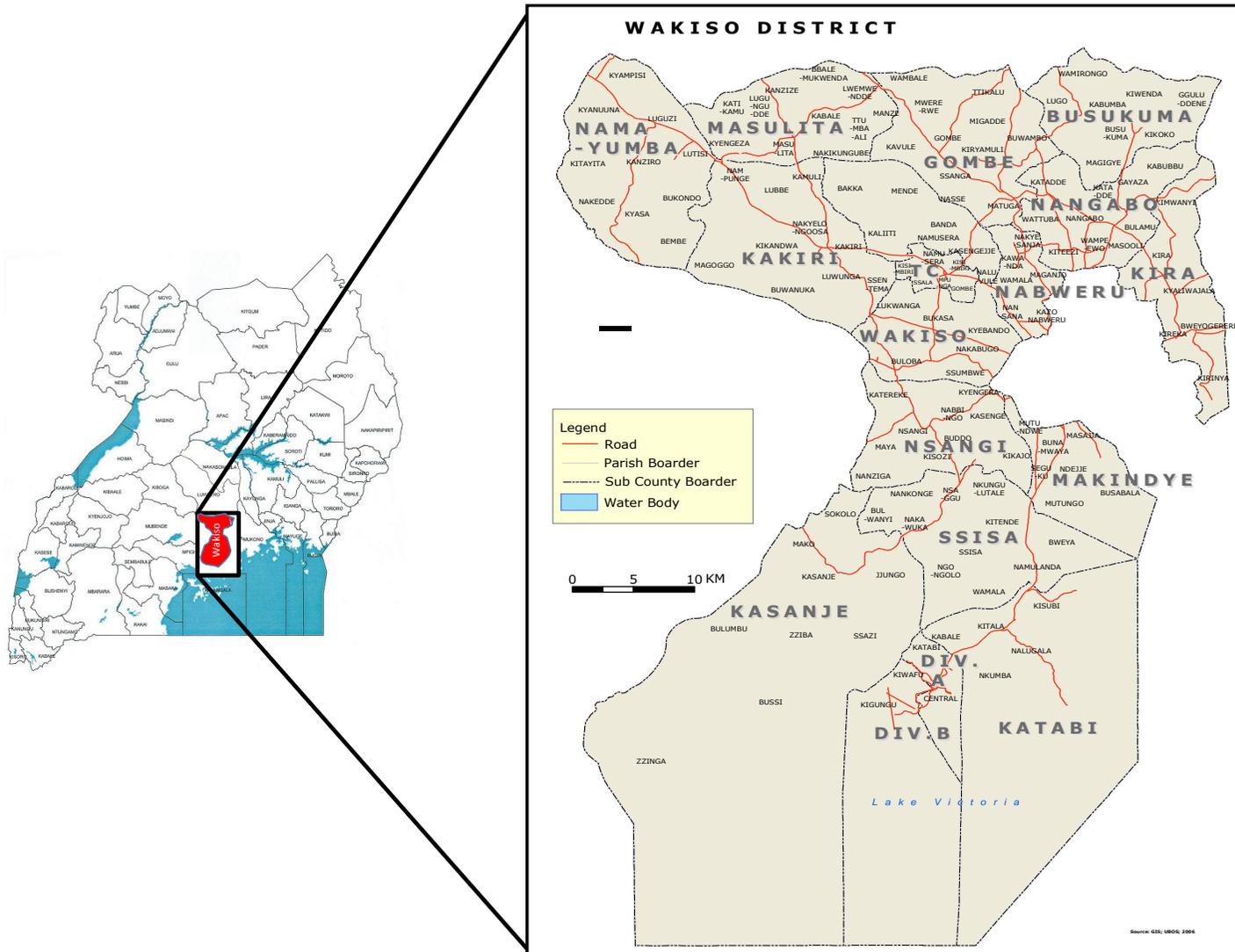
In order to obtain multiple sources of evidence on key governance issues related to land and water resources and how secure land and water rights contribute to poverty alleviation in Lake Victoria Basin, a *Case study* was selected from Wakiso district of Uganda. According to Yin (1984), a case study is, [...] *an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident, and when multiple sources of evidence exist.*

Case studies are particularly useful when someone seeks to understand some particular problem or situation in great depth and where one can identify cases rich in information. It is rich in the sense that, great deal can be learned from few exemplars on the phenomena in question (Patton, 1987). Case studies make evident the causal links in real-life interventions and the real-life context in which an intervention has occurred. The components of a case study are: the case study questions (what, why, who, where, when and how): the case study unit of analysis, as related to initial research questions, the procedural logic linking the data to the prepositions and the criteria for interpretation the findings.

6.3.1 Description of the Case Study Area

Wakiso district is located in the central part of Uganda within Lake Victoria Basin (See Map.7). The district is bordered by Nakaseke and Luwero districts to the north, Mukono district to the east, Kalangala district in Lake Victoria to the south, Mpigi district to the southeast, and Mityana district to the northwest.

Map 7: Location of Case Study (Wakiso District) in Uganda



Source: UBOS (2006) modified by Author

According to UBOS (2012) Statistical Abstract, Wakiso district has a total area of 2,807.7 km² of which open water covers 901.1 km². This implies that 32.1% of the district is covered under open water. Of the total district land cover, 1,256.2 Km² are cultivated lands with 24 km² of commercial farms, 209.1 km² is covered with grasslands while 38.6 km² comprises of bush lands. Only 30.8 km² constitutes the built up areas. UBOS statistics show that 216.4 km² of Wakiso district have been degraded. Wakiso Town Council (TC) is the biggest commercial center in the district.

The district headquarters are located approximately 20 km away from Kampala, Uganda's capital city. The district is made up of 15 sub-counties and one municipal council namely, Namayumba, Kakiri, Masulita, Gombe, Wakiso, Wakiso Town Council, Busukuma, Nangabo, Kira, Nabweru, Nsangi, Ssabagabo-Makindye, Ssisa, Kasanje, Katabi and Entebbe Municipal Council (Division-A and Division-B). In 1991 the district had population of 562,887 people but has more than doubled to 1,315,300 people in the year 2011. By the Year 2012, Wakiso district population had grown to 1,371,600 people. The district has 148 parishes (of these 26 Wards of Urban Councils) and there are 704 villages

6.3.2 Why Wakiso Case Study Area

Wakiso district is a major sub-catchment area of Lake Victoria. The district is one of the most populated in Uganda with the highest urbanization rate within Lake Victoria Basin. Wakiso district contains a number of wetlands of international significance and Ramsar sites such as Lutembe Bay wetland system - a conservation site for many globally threatened birds and endangered species. In terms of land tenure, most land in Wakiso district is held under the Mailo land tenure of which the biggest part is owned by the Buganda Kingdom (the biggest landlord in Uganda).

The biggest part of Mailo land is owned by Baganda *absentee landlords*. This has attracted many immigrant settlers and tenant (*Kibanja*) holders. The multiple overlapping and conflicting interests and land rights of bonafide *kibanja* (*bibanja-in plural*) holders on Mailo land are not legally well defined. This is a major catalyst for all land conflicts witnessed in Uganda's Lake Victoria Basin. Wakiso district is at the centre of these land tenure conflicts between landlords and tenants. Eviction threats to tenants not only discourage investment but also hinder conservation and sustainable land management practices. This justifies why Wakiso district ranks second in forest degradation with 86.7% forest cover loss after Mayuge district (GoU, 2010b:54) in Uganda.

In terms of institutional structure for land and water governance, Wakiso district presented an important case study compared to many other districts in Lake Victoria Basin. Wakiso district has a fully established District Land Board and District Water Office. The district boasts of having the necessary human resource in the capacity of district land officer, registrar of titles, staff surveyor, cartographer and as well as over 120 Area Land Committee members (OAG, 2011). It is also one of the lucky districts selected by the GoU and the World Bank as a pilot district for the development of a unique Land Information System (LIS) that also includes production of aerial photography and orthophotographs by IGN France International. However despite all these

institutional support structures, the realities on ground shows an increase in land conflicts, land grabbing, and tendencies of fraud, corruption as well as political interference in land administration. Coupled by the increasing water scarcity and water-use conflicts and other factors such as proximity and easy access to institutions, fair representation of urban and rural populations with similar livelihood characteristics of Lake Victoria Basin, Wakiso district offered the best case study selection for this research.

6.4 Types of Data Collected

There are two types of data collected for this study, namely *primary* and *secondary* data. Only data that is relevant to this study was collected and used for the analysis. In this study, Secondary data was collected first and provided background information on the problem to be investigated as well as the appropriate methodological approach to be adopted to answer the research questions.

6.4.1 Secondary Data Collection

There is very scanty information about the topic of land and water governance because land and water have often been governed separately. A few international organizations such as IFAD (2004) have documented their experiences. The knowledge base on land and water governance is weak despite its importance. This study therefore had to rely on review of secondary data from the already existing literature on land governance and water governance.

Secondary data includes all data already collected by other people and sometimes exists as published information or internal data kept within the institution. For instance, studies on (land or water) governance done by FAO (2009a), UNDP (2007a, 2007b) and World Bank (1991, 1992, 1994, & 2000) among others formed the basis of literature reviewed to understand the research problem and the missing gaps. A number of secondary sources were reviewed in order to obtain sufficient and reliable data about the research problem. The secondary data collected for this study was categorized in two major sources, namely; *internal and external sources* as summarized in Table 13.

Table 13: Summary of Secondary Data Collected

Secondary Data Source	
Internal Data Sources	External Data Sources
<ul style="list-style-type: none"> • Internal policy briefs from ministries • Sectoral performance reports • Internal expert review reports • Unpublished miscellaneous reports from NGOs like Uganda Land Alliance and UWASNET 	<ul style="list-style-type: none"> • Scientific Journals • Published text books • Web based / Internet information • Newspapers sources (e.g. New Vision and Daily Monitor) • Reports from International Organizations like FAO, IFAD, UNDP, World Bank etc.

Source: Author

6.4.2 Primary Data Collection

Primary data included all information extracted from the field by the researcher and the research assistants. A number of techniques were used to obtain primary data; these ranged from *participant observation*, *interviews with key informants* and *household survey questionnaires*. Primary data collection was collected under two research phases. The first phase aimed at institutional analysis of land and water governance in Lake Victoria Basin while the second phase mainly focused on land and water rights and assessment of governments efforts in the fight against corruption in land and water sector.

6.4.2.1 Participant Observation

Denzin (1989) defines *participant observation* as a field strategy that simultaneously combines document analysis, interviewing of respondents and informants, direct participation and observation, and introspection. The main features of this method are that the researcher dives head log into the field, observes from a member's perspective but also influences what is observed owing to his or her participation (Flick, 2009). The main features directly observed in the study included,

- The existing land use types
- Sources of water supply for the local community
- Agricultural post-harvest technologies
- Soil and water conservation practices, among others.

Local participants who were observed doing different land and water management activities where documented through photography. Participant observation helped the researcher to gain an understanding of the physical, social, cultural, and economic contexts in which participants live. This method also enhanced the understanding of the existing relationships among and between people, traditional culture and norms; and people's behaviors and activities.

6.4.2.2 Key Informants Interviews

The first phase of primary data collection involved structured interviews administered to key informants from institutions involved in land and water governance in Lake Victoria Basin Uganda. The key informants from these institutions were purposefully selected. Purposeful sampling means that researchers intentionally select participants who have experience with the central phenomenon or the key concept being explored (Creswell, 2007). The Key informants were employees of the selected institution with experience in land and water resource management. The data collected from these institutions included,

- ✓ The general role of the institution in land and water governance,
- ✓ How the institution manages conflicting rights of use, control, and ownership of land and water resource,

- ✓ The relevant guiding legal and policy instruments on which the institution bases its operation
- ✓ Challenges faced by the institution in improving land and water governance, etc.

Key informants from these institutions also provided some secondary data such as policy briefs and expert reports that enriched the analysis of research findings. Key informants' interviews were guided by a structured interview guide enclosed in Appendix (3). The list of key informants involved in this study is summarized in Table 14.

Table 14: Summary of Institutions from which Key Informants were selected (n=24)

Governance Level	Name of Institution	No.	Nature of Institution
Regional Level	Lake Victoria Basin Commission	2	Regional Institution of the EAC
National Level	Directorate of Land Management	2	Ministry of Land (MLHUD)
	Directorate of Water Development	2	Ministry of Water (MWE)
	Uganda Land Commission	1	Government Lead Agency
	National Water & Sewerage Corporation (NWSC)	2	Government Lead Agency
	National Environment Management Authority (NEMA)	2	Government Lead Agency
Sub-National Level (Wakiso District)	Deputy Chief Administrative Officer	4	District Local Government
	District Land Officer		
	District Water Officer		
	District Environment Officer		
Others (Across levels)	Buganda Land Board	2	Buganda Kingdom Institution
	Uganda Land Alliance	3	National NGO
	Uganda Water & Sanitation Network (UWASNET)	2	National NGO
	New Vision and Daily Monitor Journalists	2	Nation-wide Newspaper
Total Number of Key Informants		24	

Source: Author based on field findings

6.4.2.3 Household Survey Data

The second phase of primary data collection involved an in-depth situation analysis of land and water governance in the case study area (Wakiso district). This was based on a household survey that aimed at obtaining realities on ground in 10 sub-counties of Wakiso district. The selected sub-counties of interest include: *Namayumba, Masulita Kakiri, Wakiso Town Council (TC), Gombe, Busukuma, Nsangi, Ssisa, Kasanje and Katabi*. The sub-counties were purposively selected based on accessibility, geo-physical and environmental factors, existing land and water pressing issues among others. Sampling of research participants in qualitative research is

described as *purposive*, meaning there is far less emphasis on generalizing from sample to population and greater attention to a sample “*purposely*” selected for its potential to yield insight from its illuminative and rich information sources (Patton, 2002:40). However at the household level, *random sampling* was used to obtain a sample that is representative of the entire population. The sampling technique was based on Cochran (1977) to obtain a representative sample size from 10 sub-counties of Wakiso district. Cochran’s *Sample Size formula* below is set at 95% confidence level with an expected margin of error (confidence interval) of 5%.

$$n = \frac{Z^2 p(1-p)}{d^2} = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384$$

- Were n = minimum sample size (for population > 10,000) required
 Z = the standard normal deviate at the required confidence level, (set at 1.96 corresponding to 95%, confidence level adopted for this study)
 p = population proportion estimated to have a particular characteristic. (Where there is no reasonable estimate, a default of 50% or 0.5 was acceptable).
 d = the degree of accuracy required (Confidence Interval set at 0.05).

Cochran’s sampling formula has been widely used and tested by many scholars in scientific research. LVBC (2011:25) used this formula in a study on vulnerability assessment to climate change in Lake Victoria Basin. Also Burstein (2011) used it in a marketing optimization study. Based on Cochran’s formula, 381 out of 384 respondents were randomly selected from 10 Sub-Counties as representative of the entire population of Wakiso district.

Table 15: Household Statistics of Selected Sub-Counties in Wakiso District (n=381)

Sub-County of Interest	Men			Women		
	Sub-County Population (2012)	Observation (n)	Percentage (%)	Sub-County Population (2012)	Observation (n)	Percentage (%)
Namayumba	19900	8	3.0	19400	8	7.1
Masulita	15000	6	2.2	15500	6	5.5
Kakiri	22300	9	3.3	22800	9	8.1
Wakiso TC	10500	4	1.6	11500	5	4.1
Gombe	28900	12	4.3	31300	13	11.1
Busukuma	20400	8	3.0	20700	8	7.1
Nsangi	53200	21	7.9	57300	23	20.3
Ssisa	33900	14	5.1	35000	14	12.4
Kasanje	24300	10	3.6	23200	9	8.2
Katabi	441600	177	65.9	45500	18	16.1
Total	670000	268	100.0	282200	113	100.0

Source: Survey Data

* Sub-County Population is based on UBOS (2012)

The household survey data was collected based on a structured questionnaire (see appendix 2). The type of questions captured under the household survey questionnaire were categories in three sections that helped to obtain,

- ✓ Demographic and livelihood data of respondents
- ✓ Situation analysis on land and water rights in Lake Victoria Basin and,
- ✓ Participant's general assessment of government's efforts to fight corruption in land and water sector.

The survey was administered by the principle researcher supported by 3 research assistants. With the support of the local administration, research assistants were chosen from Wakiso district based on their level of education, experience in conducting similar surveys and ability to provide background information about the case study areas. Research assistants were therefore important in community mobilization, confidence building and creating easy access to local participants in the community. The principle language of communication was Luganda widely spoken by people in Buganda Kingdom where Wakiso district lies.

In order to avoid bias, every household in the selected sub-counties of Wakiso district was given a *non-zero* probability of being selected. This means, respondents were randomly selected in order to have an unbiased representation of the district. This method helped to eliminate voluntary response bias and guarded against under-coverage biases that usually occur in survey sampling. Leading questions that drive respondents to giving pre-determined responses were in most cases avoided but in circumstances where they were used, the leading question was followed by a probing question in order to minimize response and non-response bias.

6.5 Data Reliability and Validity Strategies

The objectivity of a piece of qualitative research is evaluated in terms of the *reliability* and *validity* of its observations. *Reliability* is the extent to which a measurement procedure yields the same answer however and whenever it is carried out, while *Validity* is the extent to which it gives the correct answer (Kirk & Miller, 1986:19). Reliability is the degree to which the finding is independent of accidental circumstances of the research, and validity is the degree to which the finding is interpreted in a correct way. In order to ensure reliability of the data collected in this study, different methods were used to crosscheck from multiple sources of evidence on a given issue under investigation. Similar questions were asked to different participants as a way of assessing consistency and reliability of the responses given. This was done through triangulation of different data sources. *Triangulation* is a method used by qualitative researchers to check and establish validity in their studies by analyzing a research question from multiple perspectives (Guion, *et al.*, 2002).

6.5.1 Triangulation

Triangulation involves the use of different data sources in order to increase the validity of the study. It combines different sorts of data on the background of the theoretical perspectives, which are

applied to the data. This may involve the use of several kinds of methods including qualitative and quantitative approaches. *Triangulation* means the researchers take different perspectives on an issue under study or more generally in answering research questions (Flick, 2009). Denzin (1970) presents four major types of triangulation relevant to qualitative research namely, *Data*, *Investigator*, *Theory* and *Methodological* triangulation.

6.5.1.1 Data Triangulation

This involves three types of data sources namely time, space, and person. Data sources can vary based on the times the data were collected, the place, or setting and from whom the data were obtained (Denzin, 1970).

6.5.1.2 Investigator Triangulation

[...] refers to the use of different observers or interviewers to detect or minimize biases resulting from the researcher as a person. Confirmation of data among investigators, without prior discussion or collaboration with one another, lends greater credibility to the observations (Denzin, 1970).

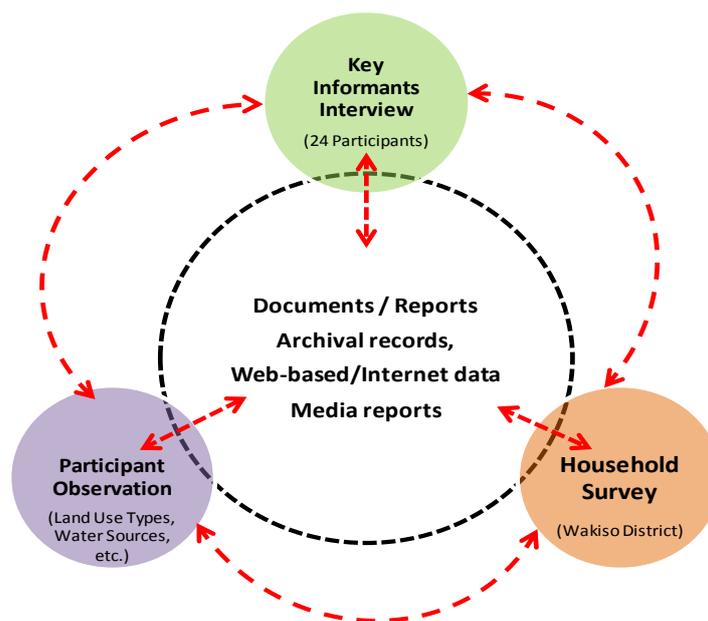
6.5.1.3 Theory Triangulation

Here data is approached with multiple theories and hypotheses in mind to interpret a single set of data. Various theoretical points of view could be placed side by side to assess their utility and power. The intention is to conduct the study with multiple lenses and questions in mind, to lend support to or refute findings. In theoretical triangulation, the perspectives or hypotheses used in the study may be related or have opposing viewpoints, depending on what the researcher hopes to accomplish (Denzin, 1970 cited in Thurmond, 2001).

6.5.1.4 Methodological Triangulation

[...] refers to the use of multiple methods to study a single problem or program. By using multiple methods, the researcher strives to decrease the “deficiencies and biases that stem from any single method hence creating the potential for counterbalancing the flaws or the weaknesses of one method with the strengths of another. Methodological triangulation can further be classified into two types - within-method triangulation and between or across-method triangulation (Thurmond, 2001). One of the primary disadvantages of triangulation is that it can be time consuming (Guion, *et al.*, 2002). Other disadvantages include difficulty of dealing with the vast amount of data, potential disharmony based on investigator biases, conflicts because of theoretical frameworks, and lack of understanding about why triangulation strategies were used (Thurmond, 2001). In order to avoid these shortcomings, this study mainly adopted the *methodological triangulation method* in which different methods of gathering data such as interviews, household survey, and observation among others were used.

Figure 16: Methodological Triangulation



Source: Author

Figure (15) shows the different methods that were triangulated to examine land and water governance issues in Uganda with specific focus on the role of institutions in secure land and water rights in Lake Victoria Basin. Throughout the entire research process, the methods of data collection used in this study were inter-dependent of the other. More than one method was used in each phase of data collection. For instance primary data obtained from key informants and household survey participants was verified with already existing secondary data (literature) to assess its reliability. Some of the oral information given by respondents had to be verified by actual observation of realities on ground. A variety of different secondary data sources like journals, text books, web information, archived records, etc. were critically reviewed to verify data collected from the household survey and key informants.

6.6 Data Analysis Procedure

Data analysis is a practice in which raw data is ordered and organized so that useful information can be extracted from it. The process of organizing, filtering and thinking about data is important to understanding what the data does and does not contain. There are a variety of ways in which researchers can approach data analysis.

6.6.1 Quantitative Data Analysis

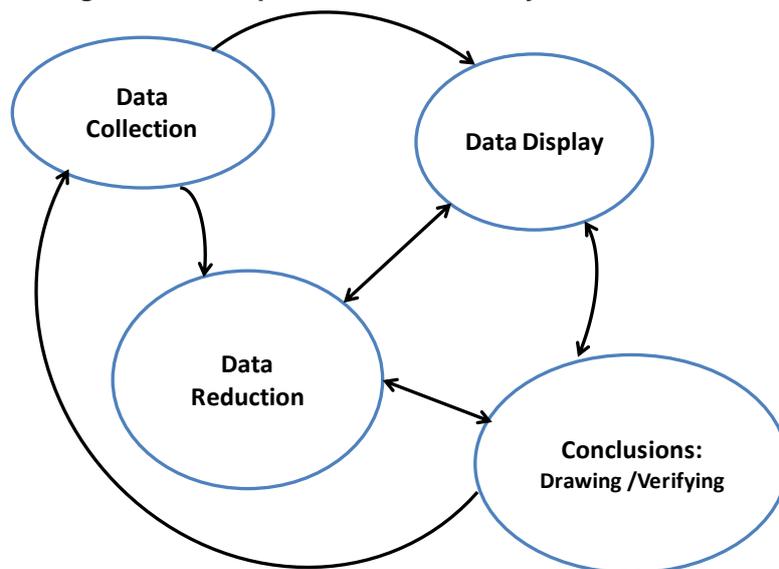
Though the study was mainly qualitative in nature, some quantitative data was collected and analyzed in order to supplement the qualitative findings. Demographic and livelihood data of respondents such as average household size, household income and size of land owned by respondents in the case study area (Wakiso district) was quantitatively analyzed using Statistical Package for Social Sciences (SPSS 17.0). The findings were summarized in form of frequencies,

percentage distribution and mean and were presented using tables, matrices, charts and graphs.

6.6.2 Qualitative Data Analysis

The core qualitative analysis of the study findings began right from the field as the data was collected through direct observation and interviewing the participants. According to Miles and Hubermann (1994) qualitative data analysis consists of three concurrent flows of activity: *data reduction*, *data display*, and *conclusion drawing /verification*. Figure (16) shows the interactions among these three components of data analysis

Figure 17: Components of Data Analysis: Flow Model



Source: Author based on Miles and Hubermann (1994)

6.6.2.1 Data Reduction

Data reduction refers to the process of selecting, focussing, simplifying, abstracting and transforming the data that appear in written-up field notes or transcriptions. Data reduction is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that “final” conclusions can be drawn and verified (Miles and Hubermann, 1994:11). In this study, data reduction was done through coding, summarizing and making clusters out of the generated data from the field. The coding of data, for example leads to new ideas on what should go into a matrix which is an example of data display (ibid).

6.6.2.2 Data Display

Data display is an organized, compressed assembly of information that permits conclusion drawing and action. Data display helps readers to understand what is happening rather than using only extended text (Miles and Hubermann, 1994). In this study, household survey data was displayed using graphs, charts, matrices and tables. Historical data focusing on issues of resource governance such as the evolution of land tenure systems in Uganda was organized and displayed in form of historical profile.

6.6.2.3 Drawing Conclusions / Verification

The final stage of data analysis ends with drawing conclusions and checking them for validity. According to Miles and Hubermann (1994), from the start of data collection, the qualitative analyst begins to decide what things mean and draw up “light conclusions”. Final conclusions may not appear until data collection is over. Conclusions need to be tested and verified lest the analyst is left with an interesting story of what happened but one of unknown truth and utility (ibid). Based on the conclusions and recommendations, the study proposes a land and water governance model that what will improve land and water governance as inter-linked resources that should be treated without separation in order to achieve the desired goal of sustainable development.

6.7 Chapter Summary

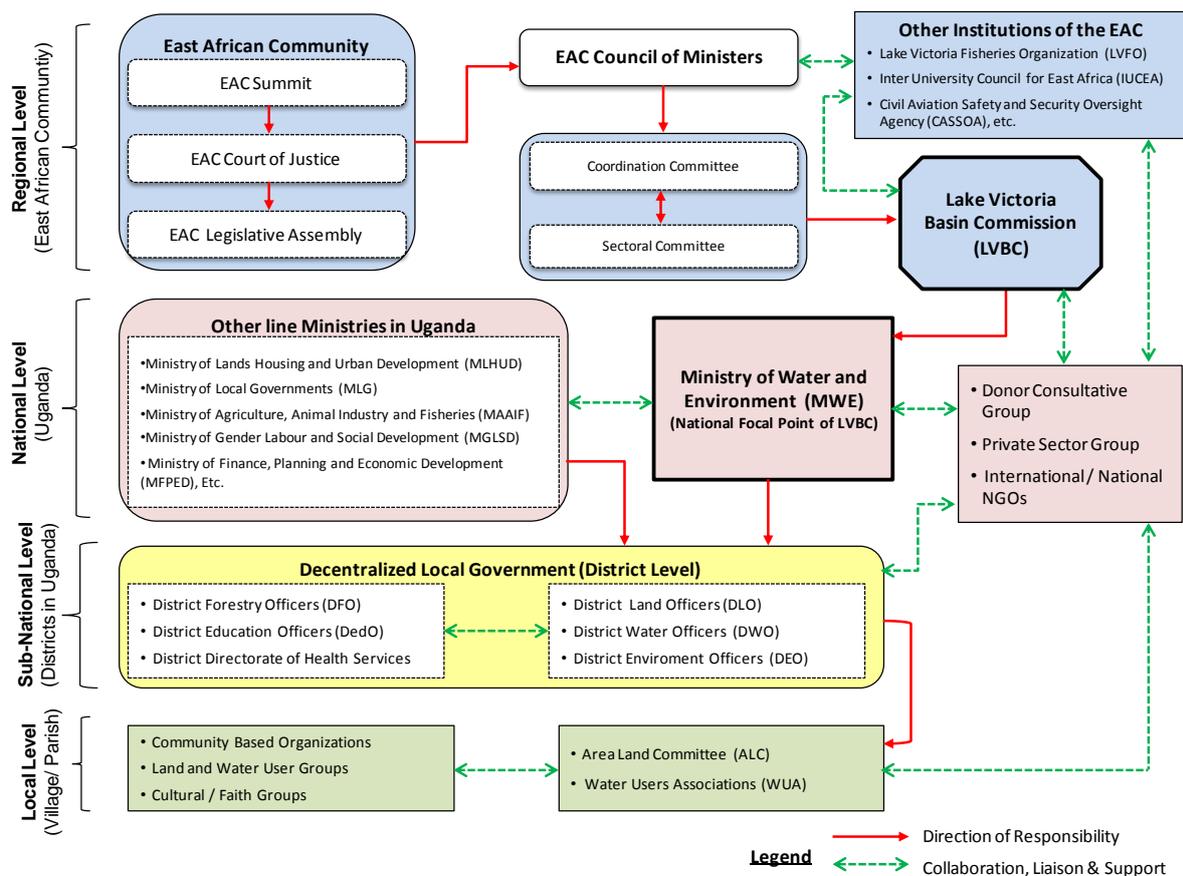
This chapter discussed the research methodologies and approaches used in execution of the study. The chapter specifically explained the choice of research methodology and the steps involved in selecting the case study area in Lake Victoria Basin in Uganda. The types of data collected were explained as well as the data reliability and validity strategies. The chapter finally discussed the procedure used in analysing the field data upon which interpretation of research findings and conclusions were based in the subsequent chapters.

Chapter Seven: The Role of Lake Victoria Basin Commission in Land and Water Governance

7.1 Introduction

This chapter presents the findings from Lake Victoria Basin Commission (LVBC) which is a specialized institution of the East African Community (EAC) that governs land and water resources in Lake Victoria Basin. The chapter also examines the legal framework for establishment of LVBC and how the Commission (LVBC) relates to partner institutions particularly the National Focal Points (NFP) within the EAC Partner States. Land and water governance in Lake Victoria Basin is implemented across four levels of governance namely; Regional (East African Community), National (Uganda), Sub-national (District) and Local (Village/Parish) level. LVBC operates at the Regional level while at the National level it's the responsibility of National Focal Point institutions (ministries) responsible for land and water governance. Figure 17 illustrates the direction of responsibilities and the line of collaboration, liaison and support across the governance levels.

Figure 18: Multi-Level Land and Water Governance in Lake Victoria Basin



Source: Author

7.2 Background and Mandate of Lake Victoria Basin Commission

Lake Victoria Basin Commission (LVBC) is a specialized institution of the EAC that is responsible for coordinating the sustainable development agenda of the Lake Victoria Basin (EAC, 2007). The Commission derives its legitimacy from the Treaty for establishment of the East African Community (1999) and the Protocol for Sustainable Development of Lake Victoria Basin (2003). LVBC is mandated to promote, facilitate and coordinate activities of different actors towards sustainable development and poverty eradication in the Lake Victoria Basin. The Protocol mandates LVBC to harmonize policies, laws, regulations and standards in the lake basin as well as promoting wide stakeholder participation in sustainable development of natural resources (EAC, 2003). Under Article 33(2) of the Protocol for Sustainable Development of Lake Victoria Basin, the Commission is specifically mandated to: promote equitable economic growth; promote measures aimed at eradicating poverty; promote sustainable utilization and management of natural resources; promote the protection of environment within the Lake Victoria Basin and promote compliance on safety of navigation (EAC, 2007).

The policy and decision making organ for the Commission (LVBC) is the Sectoral Council which comprises of ministers from the Partner States while the Sectoral Committee comprises of all Permanent Secretaries from the Partner States whose ministries' mandates relate to the Lake Victoria Basin, particularly water, agriculture, transport, communication, energy, tourism and wildlife, fisheries, environment and economic development³⁶. Each Partner State is supposed to identify one of its ministries to be designated as the National Focal Point (NFP) for Lake Victoria Basin Commission. The National Focal Point ministries provide a link between LVB Commission Secretariat and Partner States. Currently the designated National Focal Point for Uganda is the Ministry of Water and Environment (MWE) that coordinates with other line Ministries like Lands (MLHUD), Agriculture (MAAIF), Finance (MFPED), etc. in land and water governance in Uganda.

7.3 Legal Framework for Establishment of Lake Victoria Basin Commission

7.3.1 Treaty for Establishment of the East African Community in 1999

The origin of the treaty for establishment of the EAC started way back in 1993 with the establishment of the Permanent Tripartite Commission (PTC) for cooperation between three countries – Uganda, Kenya and Tanzania. After reviewing the progress made by the PTC, negotiations for upgrading the agreement into a treaty for establishment of the East African Community (EAC) were reached on 30th November 1999 and entered into force on 7th July 2000 (EAC, 2006b). The treaty highlights the urgent need for increased investment in the field of energy, transport, communications, infrastructure, tourism, agriculture, fisheries, livestock, forestry, mining and other areas of social and economic endeavor to spur development and eradicate poverty in the Lake Victoria Basin (EAC, 2003).

³⁶ See LVBC website, www.lvbcom.org

Land and water governance in LVB became a major issue of concern among the East African States. Concerns were raised about differences in the land tenure systems of Partner States and possible loss of land due to free movement and right of establishment within the EAC Partner States. The fear for loss of land arises out of varied population densities of the Partner States and within countries where weak land management systems continue to disadvantage some sections of the population. Similarly, increased competition and unfair accessibility poses a human security issue for those whose livelihood depends on land and yet they do not have security of tenure (EAC, 2011b).

7.3.2 Protocol for Sustainable Development of Lake Victoria Basin

Recognizing that land and water are finite and vulnerable resources that sustain the life of over 35 million people in the region, the need for managing land and water resources in an integrated and holistic manner; became appalling due to threatening resource conflicts and diplomatic tensions. In response to the appalling conditions, Uganda, Kenya and Tanzania agreed to sign a Protocol for Sustainable Development of Lake Victoria Basin and establish a body (Lake Victoria Basin Commission under Article 114, Section 2b (VI)) that would manage Lake Victoria Basin resources. The Protocol was ratified in December 2004. Under Article 33 of this Protocol, Lake Victoria Basin Commission (LBVC) was declared effective by the Council of Ministers (CoM) in July 2005, and became fully operational in April 2006. The treaty for establishment of the EAC was subsequently amended on 14th December 2006 and 20th August 2007 (EAC, 2003).

7.4 Objectives of LVBC and Strategy for Sustainable Land Management

7.4.1 Objectives Lake Victoria Basin Commission

According to the Protocol for Sustainable Development of Lake Victoria Basin (EAC, 2003), the Commission has got five objectives,

- i) Promote equitable economic growth
- ii) Promote measures aimed at eradicating poverty
- iii) Promote sustainable utilization and management natural resources
- iv) Promote the protection of the environment within the Lake Victoria Basin and
- v) Promote compliance on safety of navigation

7.4.2 Sustainable Land Management Strategy of LVBC

Currently, Lake Victoria Basin Commission lacks a clear policy to foster Integrated Land Management in the lake basin. Unregulated land use practices such as agriculture, industrialization and housing continue to exert pressure on land and water resources. In most Partner States, the ongoing destruction of vegetation for expansion of human settlements, forest fires, mining activities, over-grazing and demand for agricultural land render soil vulnerable to water and wind erosion. The catchment area is covered by vegetation that is threatened by activities such as charcoal burning, firewood collection and brick making that consume massive

quantity of wood (EAC, 2006a). On realizing the need to address the continued and serious land management problems in the lake basin, the Commission through a contracted process is spearheading the development of a Sustainable Land Management (SLM) Strategy for Lake Victoria Basin within the context of Lake Victoria Environment Management Project Phase Two (LVEMP II).

This basin-wide Strategy aims at promoting the wise use of land and its natural resources associated to (soils, minerals, water, flora and fauna) including the ecosystems biodiversity to meet present and future human needs whilst maintaining and enhancing ecosystem integrity. The SLM Strategy will be used to slow down and ultimately reverse the current land degradation trend and commence a new chapter in the management of the Lake Victoria Basin natural resources (LVBC, 2012). The Strategy is in line with the EAC Protocol for Sustainable Development of Lake Victoria Basin. Some of the key strategic objectives and interventions in the Sustainable Land Management (SLM) Strategy include:

- i) **Land Tenure, Land Use and Planning:** The overall goal is to promote a land use planning system and land reform that take cognizance of the regional SLM issues. The ultimate outcome of this goal is to ensure that SLM is underpinned by land use planning and pro-poor Land tenure systems by the year 2036.
- ii) **Legislative and Institutional Support:** The overall goal is to establish a legislative framework of laws and byelaws supported by institutions that are responsive to principles of good governance. A legislative and rationalized institutional framework should be established and operating effectively and efficiently by the year 2036.
- iii) **Good Governance:** The overall goal of this intervention area is to develop a SLM system that responds to the principles of good governance resulting into a system that is inclusive, participatory, equitable, accountable, transparent, responsive, effective and efficient, among others.

Sustainable Land Management (SLM) is therefore essential to reduce environmental stresses from the lake basin, through the implementation of sustainable soil and water management practices and livelihoods improvement interventions, using community-driven development (CDD) approaches, to improve water use efficiency in the Lake Victoria Basin (LVBC, 2012).

7.5 Institutions Collaborating with LBVC in Land and Water Governance

According to Article 42 (2) of the Protocol for Sustainable Development of Lake Victoria Basin, LVBC is mandated to involve, as appropriate, other parties and relevant intergovernmental and non-governmental organizations in the preparation, negotiation and implementation of national and regional programmes. LVBC therefore collaborates with a number of actors that are categorized under formal and informal collaborating institution.

Figure 19: Formal and Informal Institutions Collaborating with LVBC

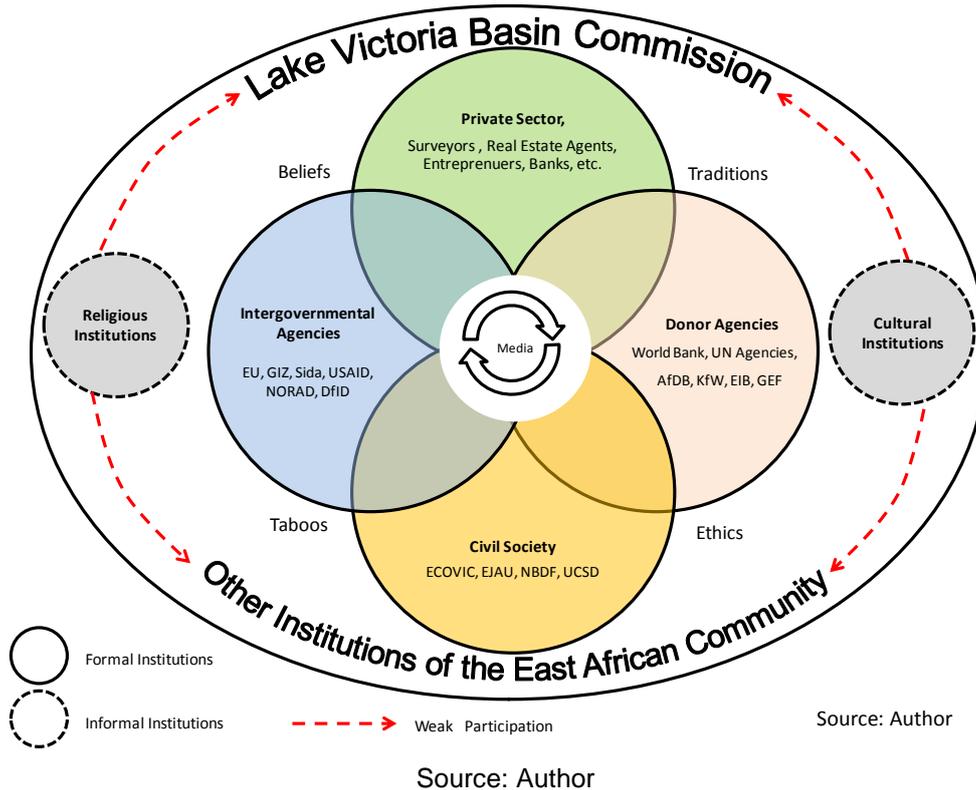


Figure 18 illustrates the interactions between formal and informal institutions that collaborate with LVBC. According to the findings, LVBC lacks a regulatory framework for guiding stakeholder participation in LVB management. A number of actors with different interests and motivations are at liberty to implement various interventions and activities within LVB. Absence of a regulatory framework results in duplication of activities and sometimes results into misallocation of financial and human resources.

7.5.1 Formal institutions collaborating with LVBC

LVBC officially collaborates with formal institutions that are legally operational in EAC Partner States. These include other institutions of the EAC, intergovernmental and donor agencies, private sector, civil society and the media. Among other institutions of the EAC which closely collaborate with LVBC include;

- i) The Lake Victoria Fisheries Organization (LVFO) which is responsible for management of fisheries resources in Lake Victoria
- ii) The East African Development Bank (EADB) which is mandated to offer a broad range of financial services to Partner States (Kenya, Uganda, Tanzania and Rwanda)³⁷ with an overriding objective of strengthening socio-economic development and regional integration
- iii) The Inter-University Council for East Africa (IUCEA) advises the EAC on matters of higher education as well as coordinating inter-university cooperation in East Africa

³⁷ Although Burundi is a new member of the EAC, its currently not a shareholder in the EADB

- iv) The Civil Aviation Safety and Security Oversight Agency (CASSOA) is responsible for promotion of safe, secure and efficient use and development of civil aviation within and outside the Partner States; assisting Partner States in meeting their safety and security oversight obligations and responsibilities under the Chicago Convention and its Annexes; and providing the Partner States with an appropriate forum and structure to discuss, plan and implement common measures required for achieving safe and orderly development of international civil aviation through the implementation of international standards and recommended practices relating to the safety and security of civil aviation³⁸.

Among the Intergovernmental and Donor Agencies include the EU, GIZ, Sida, USAID, NORAD, DfID, the World Bank, KfW, AfDB, EIB, GEF, and a number of UN Agencies while the Civil Society Organizations include ECOVIC, EJAU, NBDF and UCSD. The local and international print and electronic media play a central role in influencing people's actions and activities in LVB. The media constantly checks and reports about the performance of different institutions and often highlights their governance constraints.

7.5.2 Informal institutions in Lake Victoria Basin

The study found a number of informal institutions that significantly contribute to sustainable management of LVB resources. Informal institutions include cultural and religious organizations that guide traditions, ethics and beliefs of people. Informal institutions define a number of rules and regulations (taboos) regarding ownership and use of land and water resources in LVB. Cultural institutions mainly include Kingdoms and Chiefdoms in Uganda. The two major Kingdoms that directly share Lake Victoria in Uganda include; Buganda and Busoga Kingdom. Wakiso district – the case study of this research - is centrally located in Buganda Kingdom and hosts the coronation sites of Buganda kings at Naggalabi and other important cultural sites in Kalangala (Ssesse islands) located in Lake Victoria. According to the findings, the Buganda Kingdom is organized in 52 clans³⁹. Each clan is represented by an endangered or endemic plant or animal species found in the Lake Victoria Basin. It's a taboo for members of the clan to kill or harm such a species and at the same time, intermarriage within the same clan is forbidden and considered incest. Several other taboos are widely practiced by fishing communities along Lake Victoria. These oral taboos and traditions to conserve natural resources are informally passed on from generation to generation and contribute significantly to sustainable management of land and water resources in LVB.

Despite this significant role, there is no concrete plan by LVBC to involve such informal institutions in the sustainable management of natural resources in LVB. According to the findings, it was evident that there is weak participation of informal institutions within LVB. For instance, the Buganda Land Board - an institution responsible for administration of land on behalf of the Buganda Kingdom has no any form of collaboration with LVBC. Similarly the Uganda Joint

³⁸ CASSOA Mandate accessible at <http://www.cassoa.org>

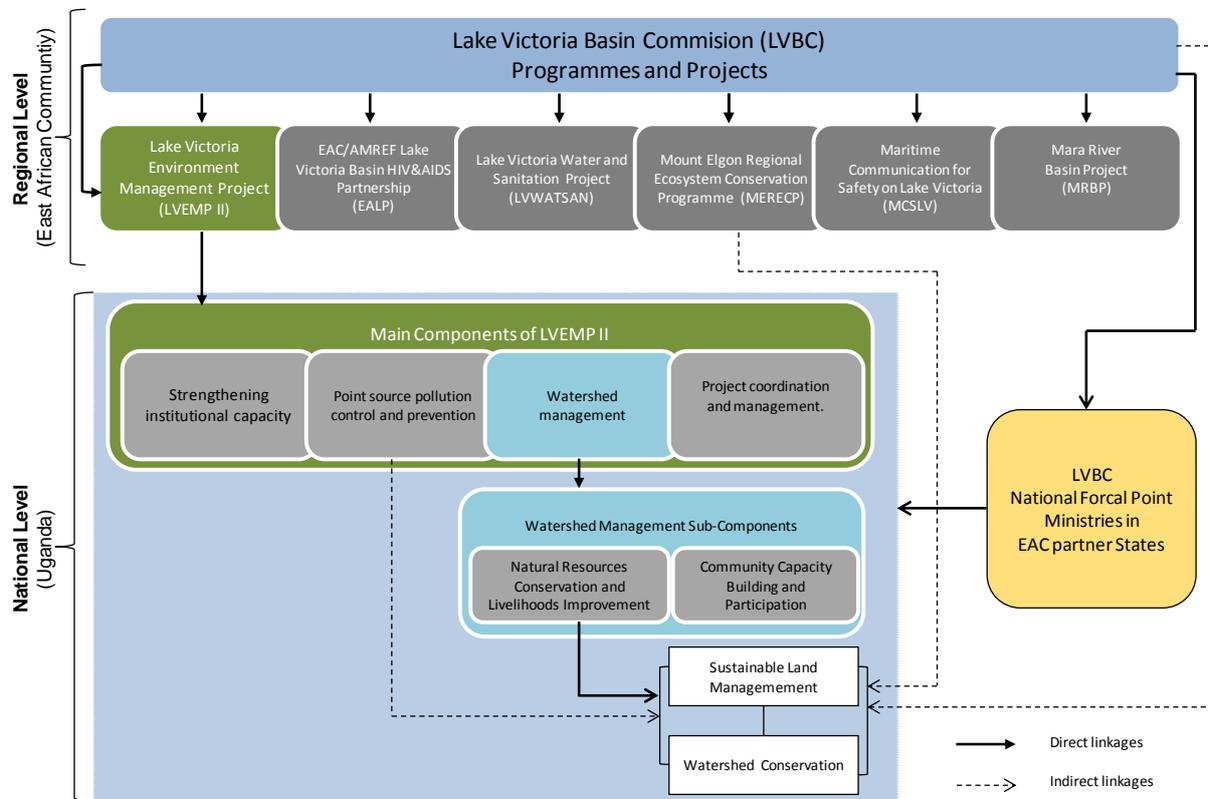
³⁹ A clan is a group of people who trace their lineage to a common ancestor

Christian Council and Uganda Muslim Supreme Council which are the prominent religious umbrella institutions do not have any formal collaboration with LVBC despite having strong contributions towards spirituality in natural resource governance in Lake Victoria Basin.

7.6 How LVBC promotes Secure Land and Water Rights in Lake Victoria Basin

The study investigated how Lake Victoria Basin Commission (LVBC) promotes secure land and water rights within its legal mandate of coordinating the sustainable development agenda of the lake basin. The Commission currently coordinates six (6) projects: (i) Lake Victoria Environment Management Project (LVEMP II), (ii) EAC/AMREF Lake Victoria Basin HIV& AIDS Partnership (EALP), (iii) Lake Victoria Water and Sanitation Project (LVWATSAN), (iv) Mount Elgon Regional Ecosystem Conservation Programme (MERECP), (v) Maritime Communication for Safety on Lake Victoria (MCSLV), and (vi) Mara River Basin Project (MRBP). It was found that there is no specific programme to address land and water governance within the framework of LVBC. The Commission’s focus on Sustainable Land Management (SLM) and Water Management is implemented within the context of the Lake Victoria Environment Management Project Phase Two (commonly known as LVEMP II). Therefore this study only evaluated the LVEMP II project which is in line with the scope and objectives of the research.

Figure 20: Land and Water Governance within LVBC Project Framework



Source: Author

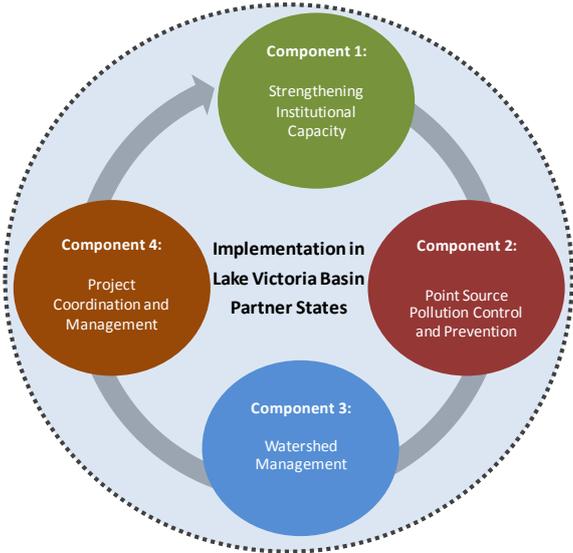
7.7 Evaluation of Lake Victoria Environment Management Project (LVEMP II)

LVEMP II is a regional project coordinated by LVBC in five countries (Uganda, Kenya, Tanzania, Rwanda and Burundi) that share the Lake Victoria Basin. LVEMP II was designed to achieve two development / global environmental objectives. Firstly, the project is meant to improve collaborative management of transboundary natural resources of Lake Victoria Basin and, secondly, reduce environmental stress in the targeted pollution hotspots and selected degraded sub-catchments as a means of improving the livelihoods of communities who depend on the natural resources of the Basin⁴⁰. LVEMP II Regional Project Coordination Team (RPCT) is based at the LVBC secretariat in Kisumu while national coordination teams are located in different urban centers of EAC Partner States like Entebbe in Uganda, Mwanza in Tanzania, Kisumu in Kenya, Kigali in Rwanda and Bujumbura in Burundi. LVEMP II started in 2009 and is expected to end in 2017. The project received total financing of US\$254.2 million contributed by the World Bank, Global Environment Facility (GEF), Swedish International Development Cooperation Agency (Sida) and the EAC Partner States. LVEMP II implementation approach is based on two governance levels, i.e. Regional (EAC) level, and at National level. The project’s interventions are implemented through National Focal Point (NFP) ministries and national institutions that directly coordinate with the Lake Victoria Basin Commission.

7.7.1 Components of Lake Victoria Environment Management Project (LVEMP II)

Lake Victoria Environment Management Project (LVEMP II) comprises of four main components: i) Strengthening institutional capacity for managing shared water and fisheries resources ii) Point source pollution control and prevention iii) Watershed management and iv) Project coordination and management.

Figure 21: Main Components of LVEMP II



Source: Author

⁴⁰ See LVBC website <http://www.lvbcom.org/>

7.7.1.1 Component One: Strengthening Institutional Capacity for Managing Shared Water and Fisheries Resources

According to World Bank (2009:13), this component aims at strengthening institutional capacity for managing shared water and fisheries resources. Its objectives are to: i) improve the effectiveness of key regional and national institutions through harmonization of national policies, legislation, and standards; ii) develop options for sustainable financing of the natural resources management interventions; and iii) develop regional frameworks for the management of key transboundary natural resources - water and fisheries. There are two sub-components: i) Harmonization of policy, and regulatory standards; and ii) Ecosystem monitoring and applied research. Component One has a budgetary allocation of US\$22.4 million for capacity building programs of regional, national, and local institutions responsible for coordination, research, management of resources, and enforcement of environmental standards. Regional institutions include LVBC and LVFO while at national level, LVB authorities/offices, fisheries, and environmental management institutions are funded under this category. Component One also supports local government authorities and community-level organizations such as the Beach Management Units (BMUs) in strengthening local capacities. Capacity is enhanced through long and short-term training; technical assistance; provision of office and laboratory equipment, and marine vessels for research, monitoring, and enforcement in each EAC Partner State.

However, the study found that despite significant contribution of informal institutions (e.g. cultural and religious institutions) in managing land and water resources in Lake Victoria Basin, there is no concrete plan for involving informal institutions in LVBC land and water governance programmes. Informal institutions promote traditional land and water conservation practices in Lake Victoria Basin. Cultural and religious institutions significantly contribute to resolution of land and water conflicts as well as mitigation of serious threats like over fishing and deforestation in LVB. Strengthening capacity building for informal institutions at local levels should be addressed by LVEMP II however according to the research findings Buganda Kingdom is not involved in LVEMP II programmes. The focus of LVEMP II capacity building programmes targets formal institutions of the State. Local institutions can only access support through their District Local Governments (DLG) of which cultural and religious institutions are not part of the DLG framework.

7.7.1.2 Component Two: Point Source Pollution Control and Prevention

The main objective of this component is to reduce environmental stresses within the Lake and littoral zone, through the implementation of mitigation and prevention measures. With a budget of US\$37.2 million, the component finances investments aimed at reducing point sources of pollution in priority hotspots. It has three sub-components: i) Rehabilitation and improvement of wastewater treatment facilities ii) Promotion of cleaner production technologies, and iii) Pollution risk management and safety of navigation (World Bank, 2009). Under this component, financing of critical repairs and improvement of existing sewerage treatment and on-site sanitation facilities

in major urban centers around Lake Victoria, such as Kampala, Entebbe, Jinja, Masaka, in Uganda are underway.

Despite several interventions by LVEMP II, there is increased pollution and eutrophication in Lake Victoria Basin. Many rivers and streams draining into Lake Victoria and the near-shore areas are heavily polluted, particularly by: a) raw and partially treated municipal and industrial effluents b) contaminated urban surface runoff c) unsanitary conditions of the shoreline settlements, and d) pollutants carried in eroded sediments, particularly nitrogen (N) and phosphorus (P), synthetic pyrethroids, and organophosphates. These pollutants bring into the Lake coliforms of fecal origin; oxygen-demanding organic substances; heavy metals, such as chromium, lead and mercury; and pesticide residues. The increased inflow of nutrients, particularly N and P, has resulted in changing the Lake chemical and bio-physical characteristics, increased eutrophication; nutrients balance problems, health problems to riparian communities, and proliferation of water hyacinth. There are a number of highly eutrophied "hotspot" areas, such as Winam Gulf in Kenya, Murchison Bay in Uganda, and Mwanza Gulf in Tanzania (World Bank, 2009).

7.7.1.3 Component Three: Watershed Management

This component focuses on the reduction of environmental stresses – like sediment loads, nutrients, and agro-chemicals – from the Lake Basin through the implementation of non-point sources pollution mitigation and prevention measures. It is supporting community-driven investments in rehabilitating three priority degraded sub-catchments of Lake Victoria. These include catchments of rivers Simiyu (11,577 Km²) in Tanzania; Nyando (3,652 Km²) in Kenya; and Katonga (15,244 Km²) in Uganda⁴¹. According to the World Bank (2009), this component has got two sub-components: i) Natural resources conservation and livelihoods improvement and ii) Community capacity building and participation. Under sub-component (I), grants are provided to local community to promote Community Driven Development (CDD) approaches that include interventions generating predominantly “public goods” or benefits, with both on-site and downstream benefits, such as sustainable soil and water management. Community funding is allocated for activities such as rain water harvesting and storage, small water reservoirs, sediment retention dams, gully erosion control, planting multipurpose trees, afforestation, and reforestation. These natural resources management investments are linked to the overall sustainable land and water management agenda in the respective countries. Component Three has a total budget of US\$43.6 million.

Although 70% of resources of this sub-component are allocated for natural resource conservation activities at the community level, many grassroots organizations find it difficult to acquire these resources due to the bureaucratic process of LVEMP II national coordinating unit in Uganda. The process of selecting CDD projects by LVEMP II Coordinating office in Uganda is

⁴¹ LVEMP II Project Profile on LVBC website <http://www.lvbcom.org>

very slow and lacks transparency. According to LVEMP II Secretariat, funds for selected CDD projects shall be disbursed through District Local Governments (DLG) in 9 districts within Lake Victoria Basin. The project beneficiaries shall then access the funds from the DLG. This bureaucratic process demoralizes local communities and negatively affects adoption of Sustainable Land Management (SLM) and natural resources conservation practices at the lake basin.

7.7.1.4 Component Four: Project Coordination and Management

This component provides resources necessary for the effective coordination and communication, and monitoring and evaluation of the project activities. At the regional level, these tasks are carried out by the Regional Project Coordination Team (RPCT) mainstreamed in the LVBC, while at the national level it's the responsibility of the National Project Coordination Teams (NPCTs). This component has two sub-components: i) Project coordination and communication, and ii) Monitoring and evaluation (World Bank, 2009). Component four has a total budget of US\$11.6 million.

7.7.2 General Synthesis of LVEMP II

Generally, the research findings show that much as sustainable land management and watershed conservation is among the main components of LVEMP II, at national level there is hardly any concrete programmes integrating land and water governance. The focus of LVEMP II is mainly to promote environmental sustainability and conservation of LVB resources. There is no concrete plan to integrate land and water governance in a meaningful manner. As a result, weak land and water governance continues to flourish in Lake Victoria Basin. The region has become a hot spot for land grabbers which have triggered land conflicts. The conflicts between different users of natural resources mainly emanate from access to and utilization of LVB resources. For instance, the conflicts within fishing communities and investors especially in the flower industry are likely to escalate as the population continues to soar while poor communities continue to be denied access to LVB resources.

Similarly emerging *territorial conflicts*⁴² between EAC Partner States over land and water resource in LVB is an eminent proof of weak land and water governance. The conflict between Uganda and Kenya over Migingo Island in Lake Victoria led to violence and sparked a diplomatic row between Uganda and Kenya with both countries posting armed forces and marines on the island besides hosting national flags to assert State ownership on the tiny island. With absence of a harmonized legal and policy framework to govern land and water resources in LVB among EAC Partner States, implementation of LVBC's objective of promoting sustainable utilization and management of natural resources is likely to be impossible. This equally affects achievement of all other objectives of LVBC aimed at promoting equitable economic growth, eradicating poverty, environmental protection and compliancy to safety of navigation.

⁴² Territorial conflicts are disputes over ownership or utilization of natural resources (e.g. land and water) between two or more sovereign States.

7.8 Challenges Facing LVBC in Promoting Land and Water Governance

According to the research findings, Lake Victoria Basin Commission (LVBC) is faced with a number of challenges that restrain it from achieving its broad mandate as stipulated under Article 33 of the Protocol for Sustainable Development of Lake Victoria Basin. Among the existing challenges include.

7.8.1 Lack of Harmonized Legal and Policy Framework

Although LVBC is legally mandated to harmonize legal and policy frameworks for management of Lake Victoria Basin resources, the findings show that the legal and policy frameworks for management and utilization of LVB resources is at variant in all Partner States. The LVBC (2012) equally confirms that most laws and policies have been developed separately to suit national, not regional, transboundary situations. Resource management in fisheries as well as in forest and agriculture suffers from predominantly sectoral perspectives and approaches. Present policies and laws are typically addressing various sector specific issues and some laws are weak and enforcement measures are wanting.

It was found that in Uganda for instance, sectoral policies on investment in agriculture, energy and environment often contradict each other. Some legislations and policies are overlapping or even conflicting making coordination and implementation sometimes difficult. The study found that the planning process and decision making approach is often from Top-Down. Some laws are weak, fragmented and usually implementing institutions suffer from overlapping mandates. For instance, in Uganda land and water legislations are split between different Ministries of Lands (MLHUD) and Environment (MWE) while policies to regulate agricultural practices fall within the mandate of the Ministry of Agriculture (MAAIF). Such overlaps often result into duplication of tasks, wasteful expenditure and poor performance in the land, water and all cross-cutting sectors.

Similarly, in other LVB Partner States like Tanzania, environmental legislation is split between different departments such as industry, forestry, mines and wildlife, regional secretariats, the National Environment Management Council and the Division of Environment in the Vice President's Office (LVBC, 2012:23). The findings show that the huge mandate of LVBC as a regional institution may remain unattainable unless all Partner States agree and effectively collaborate with LVBC in harmonization of regional laws and policies governing land and water resources in LVB.

7.8.2 Lack of Regulatory Framework to Guide Stakeholders Participation

According to the findings, a number of stakeholders are directly or indirectly involved in LVB. These actors range from private sector institutions to intergovernmental and donor agencies, civil society, media, academia, cultural and religious institutions among others. All stakeholders have varying interests, motivations and expectations. Unfortunately, LVBC lacks a regulatory framework to guide and monitor the activities of different stakeholder. The immense natural

resources such as fertile soils, forests, rangelands, and fisheries in LVB have attracted different stakeholders - some driven by the need to maximize exploitation of the natural resources in whatever manner but with minimum or no regard for the impact of their negative activities. It was also observed during field research that many stakeholders involved in LVB do not closely interact to share their experiences. The EAC (2007) also shows that there is minimal interaction between and among the various groups/ associations/NGOs implementing various projects in the region and often these groups act as adversaries to each other. Development actors including civil society organizations are at liberty to undertake any development interventions in the lake basin. The findings show that due to lack of a regulatory framework to guide and coordinate stakeholder activities, most programs are duplicated and sometimes implemented within the same area. Absence of a regulatory framework promotes unnecessary competition among stakeholders especially government ministries and NGOs competing for donor funding for similar interventions.

7.8.3 Lack of Competent and Adequate Staffing to Cope with Proposed Programs

The field findings show that the current number of staff at LVBC secretariat is relatively small to cope with the ambitious proposed programs. The secretariat consists of eight officers namely the Executive Secretary; two Deputy Executive secretaries, Projects Development Officer, Maritime Safety Officer; Accountant and two staff members on short term contractual arrangements who are responsible for coordination of LVEMP II. In addition to these, there are four members of the support staff, namely two secretaries, one office assistant and two drivers. During the field research, it was found that filling some of the vacant positions is politically influenced by governments in Partner States. According to the EAC (2007), the 15th extra-ordinary meeting of Council of Ministers (CoM) from Partner States approved the addition of four staff members to LVBC. They include the, administrative officer, legal officer, information technology officer and human resource officer. Despite addition of a few staff members, a lot of staff time is tied up in policy and administrative issues which weighs heavily on the staff work load (ibid).

7.8.4 Regional Politics Slowing Decision Making Process

The research found that decision making at LVBC is often hampered by political directives from Partner States. Decision making is often top-down and the sectoral Council of Ministers (CoM) established by the Protocol for Sustainable Development of LVB is the top decision making organ that provides overall policy direction, guides implementation of development programmes, formulates financial rules and regulations, considers and approves the budget and work programme of LVBC. The CoM approves terms and conditions of service for the staff of the Commission. Most decisions are highly political and often made to suit the interests of Partner States. At times too much consultations and long consensus often impedes progress of LVBC activities, e.g. delayed Lake Victoria Basin Commission Bill 2007. When it comes to negotiations, each minister on CoM pushes for the interest of his/her country which may be at the expense of

the entire Community, this results into unnecessary delays since decision making is mainly based on consensus.

7.8.5 Limited Funding for Lake Victoria Basin Commission

According to the research findings, LVBC operates on a very tight budget, thus there is no budgetary allocation for addressing emergencies that may fall out of the approved budget. With the emerging threats like flooding, landslides, prolonged droughts among other environmental risks posed by climate change in Lake Victoria Basin, the Commission lacks adequate financing to upscale existing coping strategies and also develop early warning systems that would lower the risks in each Partner State. The findings show that since the formation of LVBC, its primary funding mechanisms are contributions from Partner States however since 2010 this arrangement has reduced.

In line with Article 43 of the Protocol for Sustainable Development of Lake Victoria Basin which provides for other sources of funding other than the EAC Partner States, the Commission has tried to establish other funding mechanisms. For instance, its budget for FY 2007-2008 was US\$ 2,858,519 of which Partner States contributed US\$ 1,664,019 (58.2%). The remaining balance of US\$1,194,500 (41.8%) was contributed by development partners Viz. Government of France, Norway, Sweden, the World Bank, EADB, and the European Union (EAC, 2007). During the 9th meeting of sectoral Council of Ministers (CoM) held in August 2011 in Kisumu, LVBC called for increased funding for its strategic interventions.

7.9 Chapter Summary

The findings generally show that LVBC has a strong role to play in improving land and water governance in Lake Victoria Basin. The strength of LVBC lies within its legal and institutional mandate coupled by wide stakeholder infusion in LVB shared vision. Particularly the growing support from the Private Sector Foundations, Intergovernmental and donor Agencies and the Civil Society is important in provision of both financial and technical assistance to LVBC. However the political pressure normally exerted on LVBC by Partner States cripples its ability to implement its mandate.

Chapter Eight: Land and Water Rights in Lake Victoria Basin: Case Study Findings

This chapter presents the status of land and water rights in Lake Victoria Basin. The chapter is based on field findings obtained through a household survey done in Wakiso district located in Lake Victoria Basin in Uganda. The findings are categorized into demographic data and livelihood analysis which were the basis to understand the livelihood conditions of local people in Lake Victoria Basin. The chapter also analyzes the status of land and water rights in the case study area. Finally the chapter presents the perceptions of local people towards government's efforts to fight corruption in the land and water sector.

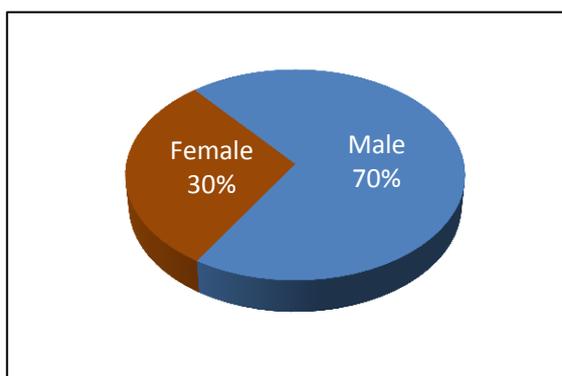
8.1 Demographic Data Analysis

8.1.1 Gender Distribution and Composition of Household Headship

In order to obtain insights about the gender dimensions in land and water governance, it was important to analyze the gender distribution of the respondents. According to the study findings, 70% of the local participants were male while only 30% were female. Despite the fact that women constitute the biggest agricultural labor force, their ability to make decisions especially regarding land are limited due to traditional norms that discourage women from active leadership and decision making in a purely male-centered society. Men are the key decision makers regarding land allocation, land use as well as managing finances accrued from agricultural production.

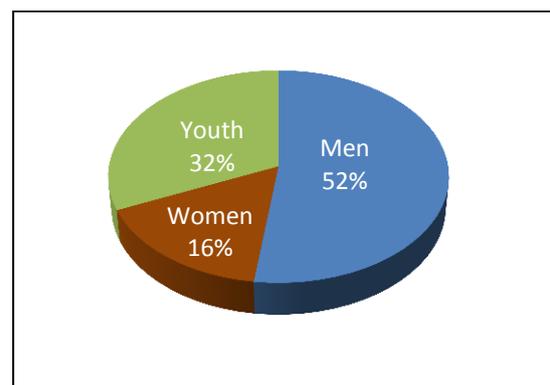
Figure 22: Gender Distribution and Composition of Household Headship

i) Gender Distribution (n=381)



Source: Survey data

ii) Household Headship (n=381)



Source: Survey data

The head of the family (usually a man) decides on which crops to plant and how the money from the harvest should be utilized. Even when the wife is to sell the harvest, she needs to seek the permission from her husband (normally the land owner) to decide how the finances should be used. Culturally women access land and water rights through their husbands or sons.

Regarding household headship, the findings show that 52% of the households are headed by men. In this study, a household head refers to “anyone who manages the income earned and expenses

incurred by the household, and is considered by other members of the household as the head". The household head could either be male or female, and is not necessarily the oldest person in the household (UBOS, 2010b). The findings show that only 16% of the households are headed by women while about 32% of the households are headed by youth aged between 18-25 years. The number of youth-headed households is gradually increasing due to the impact of HIV/AIDS that has left many orphaned children acting as household heads at an early age. In 2010, about 1.3 million pupils under 18 years were orphans (UBOS, 2012). Traditionally women only ascend to household headship under inevitable circumstances like after the death a husband. At times even after the death of a husband, the cultural norms impose a male relative as a guardian /custodian of the family property. This sometimes results into land grabbing and often exposes the widow to the wrath of discrimination and violence from the relatives of the deceased husband.

8.1.2 Age Composition and Household Size

The findings show that majority of the population (29.7%) lies between 26-32 years. On average, most respondents were about 31 years old. In order to obtain authentic data regarding land and water management, the findings were drawn from a population aged 18 years and above. The respondents were considered to be of mature mind and could independently comment on land and water issues despite the political and sensitive nature of the land debate in Uganda.

Table 16: Age Distribution and Composition of Household Size (n=381)

Variable	Frequency (f)	Percentage (%)	Mid-Rage (x)	f(x)	Mean $\bar{Y} = \left[\frac{\sum f(x)}{\sum f} \right]$
Age Distribution (years)					
18-25	96	25.2	21.5	2064.0	21.5
26-32	113	29.7	29.0	3277.0	29.0
33-40	81	21.3	36.5	2956.5	36.5
41-47	60	15.7	44.0	2640.0	44.0
48+	31	8.1	24.0	744.0	24.0
Total	381	100.0	155.0	11681.5	30.6
Composition of Household Size (HS)					
<4	49	12.8	2.0	98.0	2.0
4-8	249	65.4	6.0	1494.0	6.0
>8	83	21.8	4.0	332.0	4.0
Total	381	100.0	12.0	1924.0	5.0

Source: Survey data

The average Household Size (HS) was found to be 5 people per household. In this study, Household Size refers to the number of usual members in a household. Usual members are those who have lived in the household for at least 6 months in the past 12 months (UBOS, 2010b). However, HS may also include persons who may have spent less than 6 months during the last 12 months in the household but have joined the household with intention to live permanently or for an extended period of time. With a per capita income of US\$506, Uganda remains a very poor country

and far from the middle income status it aspires to achieve in one generation⁴³.The rapid population growth and increase in average household size pose a big burden to many families to be able to afford the basic needs of life like descent housing, education, health, water and proper nutrition.

8.1.3 Marital Status of the Population

The distribution of marital status of the population aged 18 years and above is shown in Table 17. Information on marital status is useful in studying the change in trends of widowhood, marriage practices, and property inheritance e.g. land. Uganda’s statutory minimum age at marriage is 18 years as stipulated by the 1995 Constitution. The findings show that more males than female are unmarried and that more females than male are separated, divorced and widowed.

Table 17: Marital Status of Population Aged 18 Years and Above (n=381)

Marital Status	Sex		Total (%)
	Male	Female	
Unmarried	15.3	9.8	25.1
Married	22.1	25.4	47.5
Separated	5.0	9.3	14.3
Divorced	1.1	2.0	3.1
Widowed	3.3	6.7	10.0
Total Population (%)	46.8	53.2	100.0

Source: Survey data

In general the findings show that majority (47.5%) of the respondents are married. However it was not possible to establish the form of marriage whether it was among the legally recognized types⁴⁴ by the government or not. It is widely believed that many people in Uganda are living in cohabitation - though not recognized by the 2009 Marriage and Divorce Bill. About 14.3% of the participants are separated from their spouses while 3.1% are divorced. At times divorce figures may not represent the actual status since most cultural norms in Uganda detest divorce and often presents it as a cultural abomination. Divorcees often face social discrimination and may in some communities be disqualified from assuming leadership positions. As a result, divorced couples would rather choose to be seen as separated to avert societal discrimination. In many tribes divorced women are considered a disgrace to the society and do not culturally qualify to share any marital property especially land. According to the study findings, 10% of the local participants were widowed. With the recent increase in the HIV/AIDS prevalence especially among the married couples, the percentage of widows and orphans is likely to sky rocket in Uganda.

8.1.4 Education Attainment

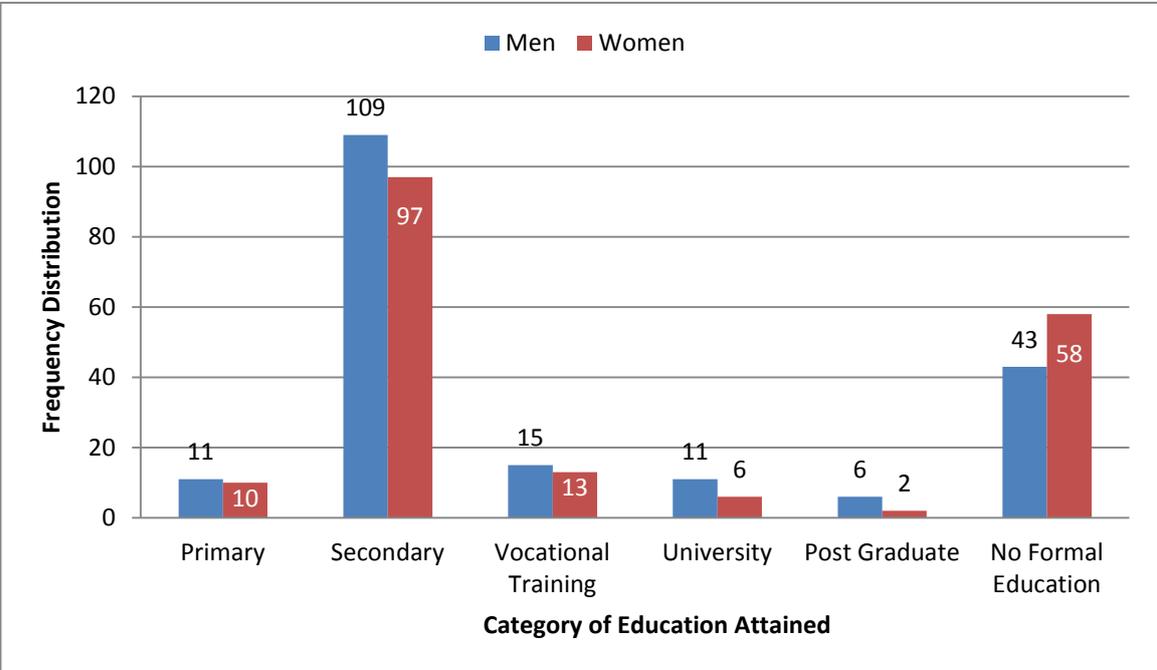
Overall, male respondents had more education attainment than female. The findings show that about 206 respondents attained secondary education. Under this category (secondary education),

⁴³ The World Bank, Uganda Overview. Available on: <http://www.worldbank.org/en/country/uganda/overview> Accessed 20 August 2013

⁴⁴ The Marriage and Divorce Bill (2009) only recognizes Christian, Muslim, Customary, Civil, Hindu and Bahai marriage.

29% (n=109) were male while 25% (n=97) were female. Both primary and secondary education categories have witnessed an increase in the number of enrollment due to the universal (free) education policy in the country. In 1997, the GoU introduced Universal Primary Education (UPE) to offer free primary education for all. Though not all parents have embraced UPE due to a number of reasons, enactment of the new Education Act now makes primary education compulsory for all children (UBOS, 2010). From the study findings, it's evident that majority of the respondents had education above primary level. In 2007, Uganda became the first country in Sub-Saharan Africa to implement free secondary education through the Universal Secondary Education (USE) program. USE aims at addressing the challenges of poor transition from primary to secondary education created by a combination of factors that include inadequate infrastructure and rampant poverty (UBOS, 2010). The implementation of USE explains why majority of the participants 54% (n=206) had attained secondary education as illustrated in Figure 22.

Figure 23: Marital Status and Education of Respondents in Wakiso District (n=381)



Source: Survey data

Out of the total respondents (n=381) involved in the survey, only 28 participants (about 7%) had attained vocational training. Of these, 4% were men while 3% female. Generally vocational training has not received the necessary support from the Government of Uganda. Equally most parents and students perceive vocational training as inferior and a form of education for academically weak students who could never make it to University. This wrong perception has a negative impact on job creation and innovation as most university graduates are mainly job seeker rather than job creators. Despite the introduction of free education (UPE and USE), there is still a big population of Ugandans who have not attained any formal education. The findings show that 101 out of n=381 respondents had no formal education. This constitutes about 27% illiteracy rate of the entire population of which the majority are female. The GoU is aware that illiteracy and inadequate basic

education deprive the people of the opportunity to realize their potential and effectively participate in decision making and other development activities. In response to this problem, the government has committed to provide non-formal education with specific reference to functional adult literacy (FAL) programs (UBOS, 2010).

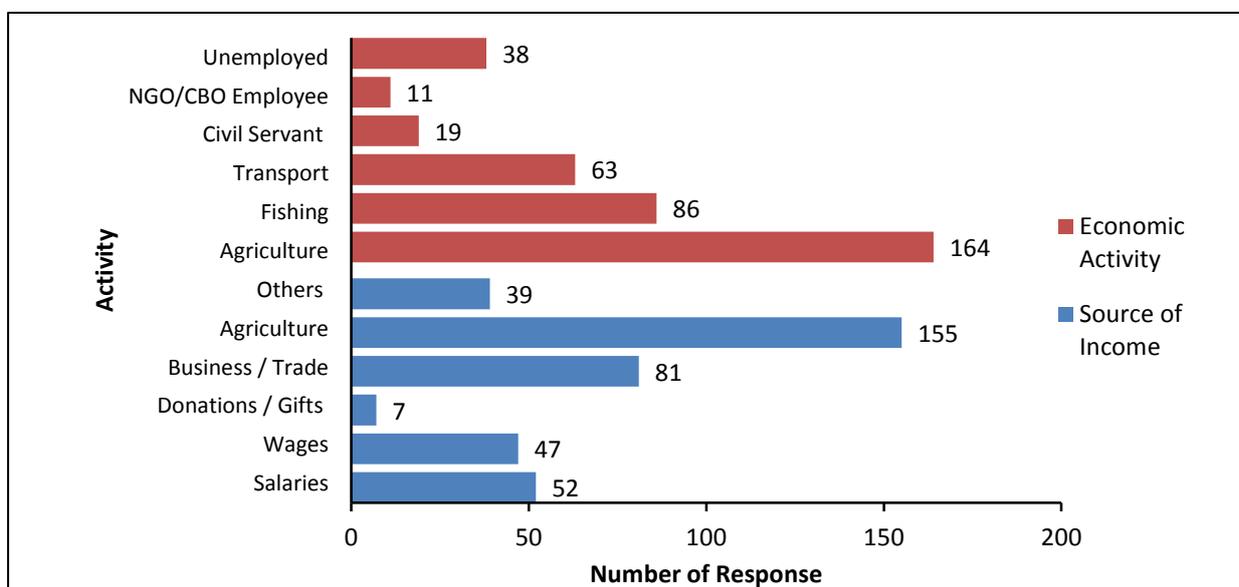
According to the findings, only 17(4.5%) respondents had attained a university degree while only 8 (2.1%) participants had either enrolled or completed a post-graduate program. The findings show that most participants who had attained above university education were male. Even with the presence of public private partnership (PPP) in the education sector, the number of private higher institutions of learning is still very low to absorb the massive numbers of students coming from secondary level. By the year 2011 Uganda had only 140,087 students enrolled in the 32 universities in Uganda. 78,817 (56%) were male while 61,270 (44%) were female (UBOS, 2012). The number of female enrollment in higher education has continued to remain low compared to male especially in rural areas where education of the girl-child is not highly prioritized in family affairs.

8.2 Livelihood Analysis

8.2.1 Household’s Economic Activities

The findings show that out of the n=381 participants, 164 (43%) are directly employed in agriculture (Figure 23). Despite the continued decline of the agricultural sector to the total GDP in Uganda, agriculture still provides the main source of income to most households in Uganda.

Figure 24: Occupation and Source of Income in Wakiso District (n=381)



Source: Survey data

Over 80% of Uganda’s farmers are involved in subsistence production. The farmers mainly grow for home consumption with only a small portion of their produce sold to local markets. However, recent developments in Lake Victoria Basin have attracted a number of large-scale irrigation farming mainly in horticulture and floriculture sector. A number of flower farms owned by Asian

investors have had adverse impacts on environment. Despite the presence of several environment protection laws in Uganda, implementation is weak and institutions such as NEMA often suffer from political pressure to approve Environmental Impact Assessment (EIA) reports from foreign investors despite significant negative impacts.

Apart from agriculture, the findings show that fishing is the second economic activity in Wakiso district. About 86 (22.6%) respondents were directly involved in fishing. The proportion of the population that indirectly benefit from fishing is even bigger, for instance many people are employed in fish processing, packaging, transportation, etc. It was found that there are two major fishing landing sites in Wakiso district. These include Kasenyi and Kigungu. Generally all landing sites are poorly managed. Fish handling, poor sanitation and hygiene, lack of proper waste management facilities among others pose a health risk to lives of many fishing communities. However, Kasenyi landing site is more developed in terms of infrastructure and therefore employs more people than Kigungu landing site in Wakiso district. Kasenyi landing site (mainly for tilapia fish species) has a fish handling and purchasing area, boat landing areas and a recreation beach. The landing site can accommodate over 50 motorized canoes /boats.

Photo 1: Overloaded Passenger and Fishing Canoes



Source: Photos by Khanjan Mehta

In the past, Uganda's fisheries industry used to boast of over 300 endemic fish species, several of which are targeted for commercial and subsistence exploitation. However, over time, the composition of the fish species (especially in Lake Victoria) has changed due to over exploitation and introduction of exotic species which have led to the extinction of several native species. There are now only 23 commercial species of fish in Uganda's water bodies (NWDR, 2006). According to the findings 63 (16.5%) participants were employed in the transport sector (on both road and water transport). Most youth in urban areas are employed as taxi drivers and passenger motorcyclists (*bodaboda*). Some are involved in transporting goods on the lake using boats and wooden canoes. Most canoes found on Lake Victoria were in poor conditions and are usually overloaded with fish, charcoal, firewood and passengers. This explains one of the major causes of water accidents especially on Lake Victoria.

The findings show that only 5% (19 respondents) are employed as civil servants. The civil service includes teachers in public primary and secondary schools, public universities, police, prisons, and the Local Government’ staff. Usually teachers/ professors in private schools/universities are not included within the civil service statistics. Civil service also excludes employees of semi-autonomous institutions and parastatals (UBOS, 2012) such as ULC, NWSC, and NEMA which are actively involved in land and water governance. The study found that about 2.9% (11 participants) were employed with NGOs. This number excludes non-paid workers (volunteers) in NGOs and CBOs. The findings show a relatively big number of unemployed people in Wakiso district. Approximately 10% (38) of population did not have any form of employment. There is a rapid increase in unemployment rates in LVB. Majority of the unemployed are youth who either dropped-out of school or do not have any form of vocational skills. Similarly, the elderly and people with disabilities (PWDs) are among the most unemployed in the country. Unemployment often leads to increased crime, prostitution, gambling, hooliganism and all sorts of drug abuse which are a major threat to peace and stability.

8.2.2 Source of Household Income

According to the findings in figure 23, about 41% (155 respondents) derive their household income from agriculture. Even with diversification of the economy, agriculture still remains the main source of household income and employs over 80% of Uganda’s population especially women. Currently there is a shift from cultivation of traditional cash crops (like cotton, coffee, tea and tobacco) to non-traditional agricultural (NTA) exports like maize, beans, bananas, vanilla, red chili, sunflower, and groundnuts. NTA exports are on high demand especially among the Common Market for Eastern and Southern Africa (COMESA) member States.

Photo 2: Transporting Bananas⁴⁵ to the Market



Source: Author

According to the findings 21% (81 respondents) are involved in agribusiness. Rapid growth in cross-border trade in agricultural products, farm inputs, agro-processing and transportation offers employment to many people living in LVB. However agribusiness enterprises are faced with

⁴⁵ Bananas commonly referred to as “*Matooke*” is one of Uganda’s main Non Tradition Agricultural Export

problems of poor infrastructure and lack of reliable electricity to support agro-processing. The poor state of roads in rural areas (which are the source of all food and agricultural raw materials) negatively affects agribusiness in the region. The findings show that the other sources of household income in Wakiso district include, monthly salaries reported by 52 respondents (14%) mainly employed in civil service and the private sector. About 47 respondents (12%) depend on daily wages. The average daily wage rate for a casual laborer is about 5,000 UGX (US\$2). About 1.8% (n=7) respondents depend on gifts and donations for their livelihood. Majority of these respondents are elderly, disabled, orphans and vulnerable children in rural areas.

8.2.3 Average Monthly Household Income Derived from Lake Victoria

Income is one of the monetary dimensions for measuring well-being. For the purpose of this study, household income is defined as the sum of income both in cash and in-kind that accrues from economic activities performed by household members (UBOS, 2010) in Lake Victoria Basin. The components of household income include; income from enterprises (business and trade), salaries and wages, donations and gifts; and income from subsistence activities like agriculture. The income is expressed in US dollars (US\$).

Table 18: Average Monthly Household Income in Wakiso District (n=381)

Variable	Frequency (f)	Percentage (%)	Mid-Rage (x)	f(x)	Mean Income $\bar{Y} = \left[\frac{\sum f(x)}{\sum f} \right]$
Monthly Income (US\$)					
≤ 50	65	17.1	25.0	1625.0	25
51-100	31	8.1	75.5	2340.5	75.5
101-150	250	65.6	125.5	31375	125.5
151-200	27	7.1	175.5	4738.5	175.5
≥200	8	2.1	100.0	800.0	100.0
Total	381	100.0	501.5	40879.0	107.3

Source: Survey data

According to research findings, the average monthly income of households in Wakiso district is about US\$107. About 66% of the population earns between US\$ 101-150 per month. This is income mainly accrued from economic activities carried out in Lake Victoria Basin. Most participants falling under this income category are smallholder farmers. Their farming practices are characterized by handheld hoes and family labor on approximately 2 acres of land. Smallholder farmers lack access to capital for agro inputs, no training in modern farming and lack access to post-harvest storage and processing technologies. Several studies done by international organizations like IFAD, FAO show that smallholder famers have the potential to be competitive and engage in commercial production only if they access capital, training and use modern technologies to reduce post-harvest losses. The findings from this study show that over 90% of the farmers lacked proper storage facilities for farm produce. Poor storage leads to post harvest losses which in turn translates to the low household incomes.

Photo 3: Post-Harvest Storage Facilities for Maize and Cassava



Source: Author

During the field research, most households dried maize and cassava on dusty compounds and the harvest is simply covered by a large plastic tarpaulin in the compound. The harvest often gets destroyed by rodents, termites and rain. Most farmers complained about theft of farm harvest due to lack of secure storage facilities. Findings from Wakiso District Local Government revealed that there is no government program to support farmers to improve storage facilities. A few NGOs such as VEDCO have started supporting rural farmers in construction of wooden storage facilities to reduce post-harvest losses. Photo 4 shows an improved wooden storage facility under construction by VEDCO. This facility is roofed with corrugated iron sheets to protect the harvest from rainfall.

Photo 4: Improved Semi-Permanent Wooden Storage Facility



Source: Author

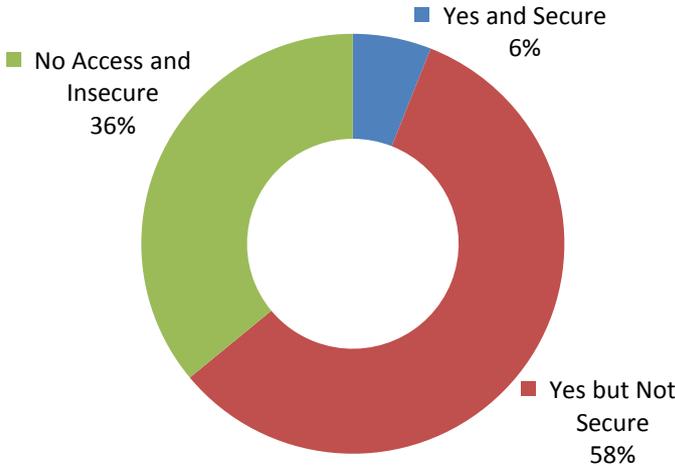
8.3 Status of Land Rights in Wakiso District

There are three principal rights linked to the spatial dimension of land: use rights; control rights; and transfer rights. *Use rights* refer to the right to use land for growing crops, passage, grazing animals, and the utilization of natural and forest products. *Control rights* refer to the rights to make decisions about how the land should be used and how benefits should be allocated. *Transfer rights* refer to the right to sell or mortgage land, convey land to others, transmit the land through inheritance and reallocate use and control rights (IFAD, 2008). This section presents findings on the status of land rights in Wakiso district.

8.3.1 Land Tenure System and Access

Over 90% of land in Wakiso district is held under Mailo land tenure (see details of Mailo tenure in Chapter 2). About 4.8% of the land is held under leasehold while a small proportion falls under customary tenure system. Gradually some customary lands are being converted into freehold tenure. Land tenure determines the mode of access to land. However, while access to land is a major factor in determining household livelihood standards; many rural farmers still lack access to enough land for production. Access to land refers to “the ability to use land (Bruce, 1998)” and “other natural resources, to control the resources and to transfer the rights to the land and take advantage of other opportunities (FAO, 2002).” Secure access to productive land is crucial for the millions of poor people living in rural areas and depending on agriculture, livestock or forests for their livelihood. It reduces their vulnerability to hunger and poverty; influences their capacity to invest in their productive activities and in the sustainable management of their resources; enhances their prospects for better livelihoods; and helps them develop more equitable relations with the rest of their society, thus contributing to justice, peace and sustainable development (IFAD, 2008). Figure 24 illustrates the proportion of respondents with access to land in the study area.

Figure 25: Access to Land and Security of Tenure (n=381)



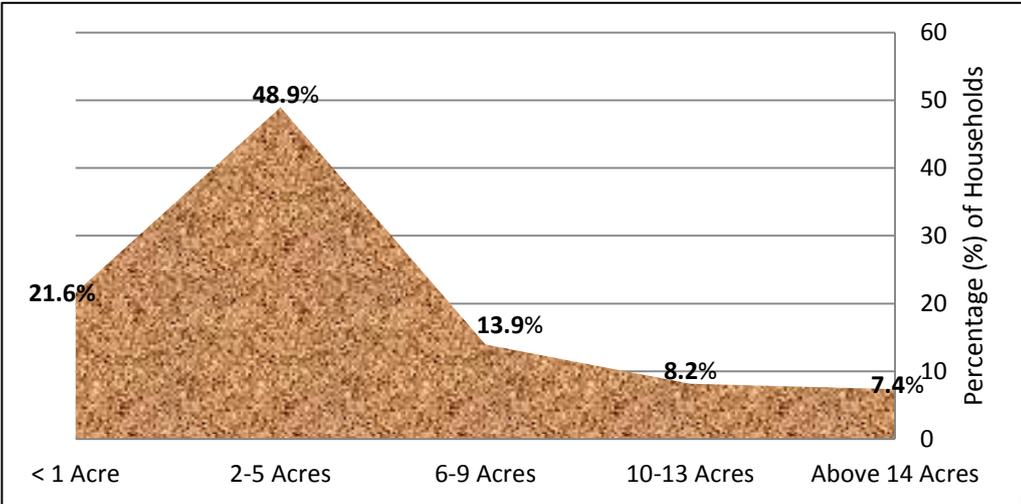
Source: Survey data

According to the research finding, only 6% of the population (23 respondents) had full security of tenure on the land they occupied. According to the local people, security of tenure is only guaranteed when one holds a land title. Although most respondents (58%) have access to land, it was found that the land rights of the majority are limited to only use rights. Most tenants require the approval of the landlord before making any land use decisions. Although Uganda has laws to protect tenants, landlords have the right to mortgage and or sell land sometimes without the consent of the sitting occupants. This is one of the major causes of land conflicts in central Uganda - particularly Lake Victoria Basin. It was found that about 36% of the population has no access to land. Landlessness is the major indicator of poverty in Uganda. Lack of access to land translates into household food and nutrition insecurity, desperateness and social exclusion. Without access to land, the household can neither secure credit from Banks nor easily access soft loans from microfinance institutions. Majority of landless people are rural women, orphans and vulnerable children (OVCs) and ethnic minority groups. They often become illegal settlers and encroachers on public forests and wetlands in Uganda.

8.3.2 Average Size of Land Owned by Respondents

According to the findings, most respondents (48.9%, 186) own between 2-5 acres of land while about 21.6% (n=82) own less than one acre of land. It was found that only 13.9% (n=53) respondents own between 6-9 acres of land while 8.2% owned between 10-13 acres and 7.4% owned above 14 acres of land. The small nature of most farm plots makes it uneconomical for mechanized agriculture, thus most families depend on household labor. However there are some large scale investor flower farms like Rosebud Ltd which own over 50 acres of land on Lake Victoria shores. Such large scale land development mainly by Asian investors were excluded in the analysis for this study since they could not provide the true picture of the average size of land owned by local citizens. Figure 25 illustrates the average size of land owned by local people in Lake Victoria Basin.

Figure 26: Average Size of Land Owned by each Household (n=381)



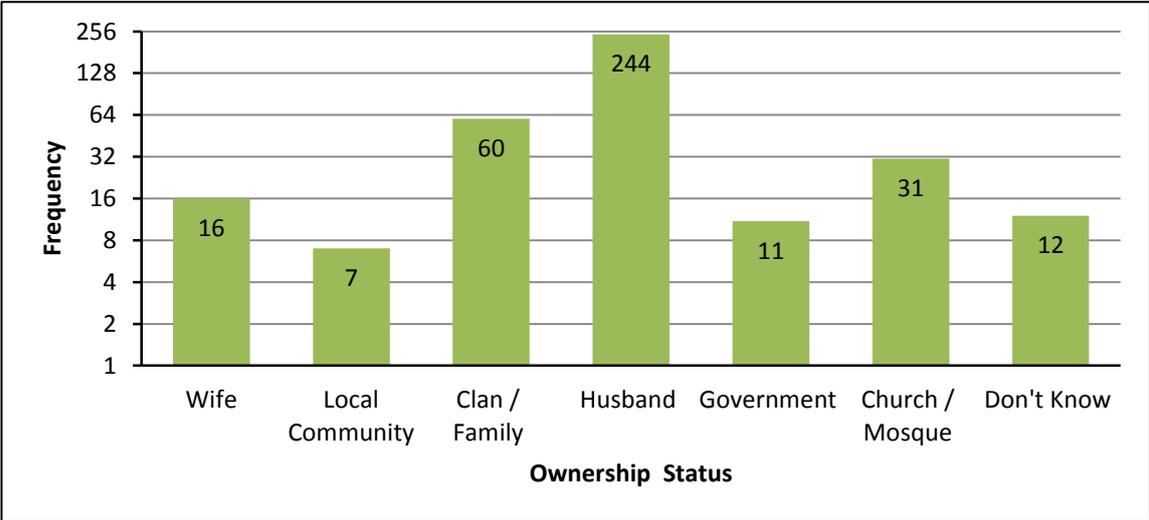
Source: Survey data

The findings show that the size of land owned by a household basically defines its social status. Families that hold more than 10 acres of land were socially considered to be rich and thus constitute most political leadership and decision making positions in the community. In Buganda Kingdom, such household heads assume a royal title of “*Bataka*” which literally translates to landlords while the Buganda King is often referred to as “*Ssabataka*” literally meaning the head of all landlords. However it was found that there has been a gradual reduction in the size of land owned by the “*Bataka*” due to the patrilineal practice of fragmenting land upon inheritance. The size of land is bound to reduce even further due to the rapid population growth in Lake Victoria Basin where patrilineal inheritance customs still prevail.

8.3.3 Status of Land Ownership and Control

Access to land does not necessarily mean ownership of land. Most households may have access to some form of land but have limited rights over the land they occupy. The rights of many rural farmers especially women are limited to only use rights. Ownership and transfer rights are mainly vested in the male household heads. Security of tenure increases with those who own land in perpetuity and can therefore control, transfer, sell and or mortgage the land. The findings show that although most women had some sort of access to land for production, their tenure security status depends entirely to their relationship to the male kin (husbands) who own the land. Unmarried women and women without children face severe threats of eviction from family land. In Buganda culture, the security of tenure for a woman increases if she gives birth to a male child who is seen as a potential heir to the family property.

Figure 27: Status of Land Ownership and Control (n=381)



Source: Survey data

The findings reveal that majority of the land owners (64%, 244) are male. Uganda is a patrilineal society in which most property especially land is passed on to the male heirs of the family. Women have been marginalized in regards to land ownership, education, business ownership, skills development, access to financial resources; employment and inheritance rights (GoU, 2010). Only 16 women (4.2%) reported to own land through individual purchases. Even though the 1995

Constitution and 1998 Land Act provides for women's legal rights to own and inherit land, in reality, the situation on ground shows that women's access to productive resources like land continues to be limited by cultural norms that favor male inheritance especially in rural areas. Traditionally women's access to land is dependent on their relationship to a male, usually husband, father, brother, or son. Women acquire land use rights usually through marriage. Only a few women have been able to purchase land individually. Uganda's 1995 constitution prohibits discrimination based on gender and accords men and women the same status and rights. In addition to the guarantee of property rights without bias to gender or marital status, the constitution also calls for equal land rights for men and women during a marriage and at its dissolution. This legal provision is also enshrined in the highly contested Marriage and Divorce Bill (2009) that is currently in Parliament for debate. Under Article 32(1), of the Constitution, the State is enjoined to take affirmative action in favor of marginalized groups on the basis of gender or other reason created by history, tradition or custom, for the purpose of redressing existing imbalances (Bomuhangi *et al.*, 2011:6). However despite such Constitutional provisions, women are widely discriminated in the society.

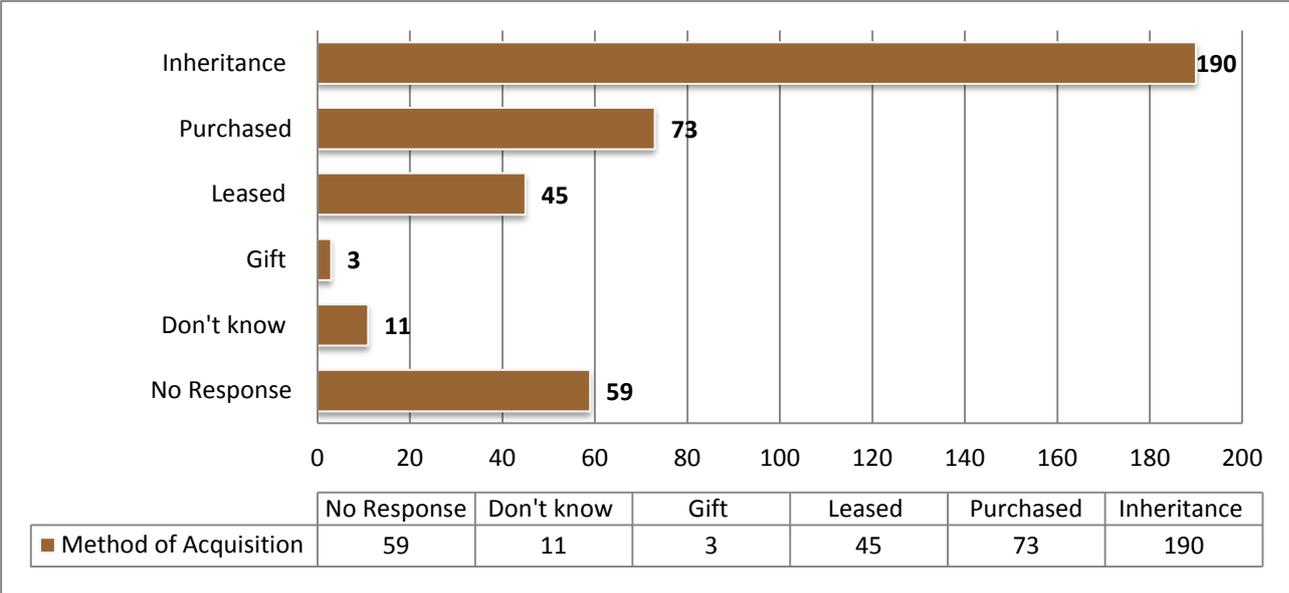
According to the findings, 60 participants (15.7%) use family/clan land. There are 52 clans in Buganda Kingdom. All Baganda people belong to at least one of these clans. A clan is a group of people who trace their lineage to a common ancestor. Many people own land as a clan/family. The land may be used for agriculture, eco-tourism, or traditional purposes like holding family cemeteries, clan rituals, and other development projects. The registered title of such land is usually kept by the clan leader "*Omukulu w'ekika*" in trust of all clan members "*Abazukulu*". This mode of land holding is also similar to land owned by religious institutions like churches and mosques in which the rights are protected by a custodian (e.g. bishop, mufti) on behalf of the present and future generation. From the findings, 31 participants (8.1%) live on such land owned by religious institutions while 12 participants (3.1%) reported not knowing the actual owner(s) of the land they occupied. These are mainly immigrant squatters like pastoralists "*abalaalo*" from other regions of the country who settle wherever they find underutilized land. They have always been at the center of most land conflicts in the region.

From the field findings, about 3% (11 participants) use public land. This is land that is kept in trust by the State for the people of Uganda. It includes forest reserves, wetlands and national parks and other protected areas in Uganda. Public land is managed by Uganda Land Commission (ULC) and other semi-autonomous government agencies such as the National Forestry Authority (NFA) and National Environment Management Authority (NEMA). Public land is often prone to degradation by encroachers. Land degradation partly occurs due to inability of the government to implement land laws meant to protect ecologically sensitive areas in Uganda. The findings show that most wetlands which were preserved for water purification and biodiversity conservation have been degraded by human activities like agriculture, sand and clay mining, and illegal construction. Commercial brick making for the growing construction industry is among the lucrative economic activities carried out mainly by youths living in wetland areas.

8.3.4 Methods of Land Acquisition

In order to ascertain the level of land tenure security, it was important to investigate the methods in which land is acquired within the study area. The manner in which land is acquired has a significant influence on land development and prescribes the nature of tenure security of the occupant. The findings show that almost half of the respondents (49.8%, 190) acquired land through inheritance while about 19.2% (73 respondents) acquired land through individual purchase. Only 11.8% (45 participants) acquired land through leasehold. Majority of the land owners are men. Most women cannot afford to purchase land due to their limited income-generating activities. Yet, even when women can accumulate the required financial resources to purchase land, social norms exclude them in favor of male land purchasers.

Figure 28: Methods of Land Acquisition in Wakiso District (n=381)



Source: Survey data

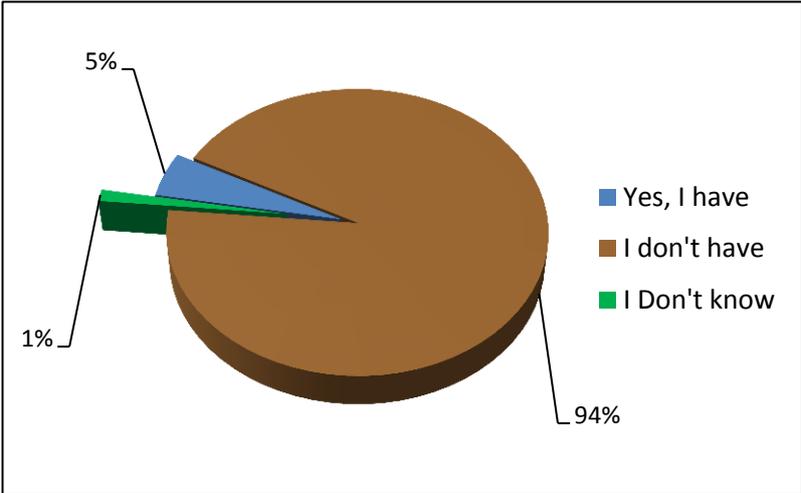
According to the study findings, 59 respondents (15.5%) did not declare how they acquired the land. This is mainly because of the fear for losing the land especially when it was acquired through illegal means like grabbing or encroachment. In some circumstances where the rightful landlords could not be traced, 11 occupants (2.9%) reported that they did not know the landowners. As tenants, they often face threats of eviction from purported relatives or administrators of the absentee landlords. It was found that even where most tenants were willing to purchase the land they occupy, sometimes genuine landlords on Mailo land cannot easily be traced.

8.3.5 Status of Land Title Acquisition

Land titling is a process which involves registering formal property rights to enhance ones security of tenure (MLHUD, 2010). According to the findings, 94% (358 respondents) do not have land titles to guarantee their tenure security. Majority of the local people hold informal hand written agreements for either sale or transfer of land. Only 5% (19 respondents) had land titles

registered in their names. With the increase in title forgeries, it's even becoming more difficult to identify an authentic title from a forged one. As a result, all financial institutions must undertake a title verification with the MLHUD before any credit can be advanced to a client. This normally delays the process and involves a search fee. It was found that forged land titles are normally executed by the staff of the land registry in the MLHUD while sometimes they may occur outside the registry by non-staff. Absence of land titles implies that most people are tenure insecure and consequently their motivation to invest in long term land development projects is very low.

Figure 29: Status of Land Titles in Wakiso District (n=381)



Source: Survey data

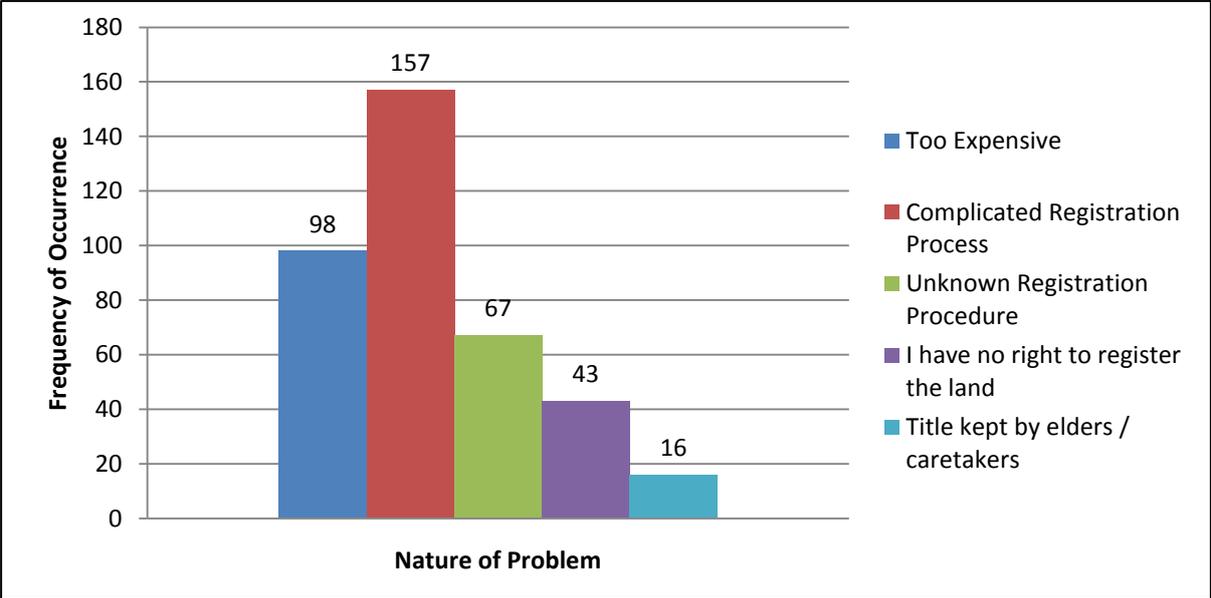
The findings from the Uganda National Development Plan (NDP) equally show that over 95% of land owners in Uganda do not have land titles to guarantee their security of tenure. The NDP points out the problems of accessing land titles which are compounded by: bureaucracy, manual operations, corruption, low level of funding to the sector, legal and regulatory constraints, attitude, culture, squatters, historical issues, shortage of relevant skills such as land surveying and many other related problems (GoU, 2010). It was therefore imperative to equally investigate the factors that impede local people from acquiring land titles in the study area.

8.3.6 Problems Hindering Land Title Acquisition

According to the findings, 41% (157 respondents) pointed out the complicated registration process as a major obstacle in acquiring land titles. The bureaucratic procedure at the ministry (MLHUD) creates room for corrupt tendencies to prevail. Corruption increases cost of land titling and often excludes the poor from accessing the necessary services. Land titling is very expensive and unaffordable to most people. About 25.7% (98 respondents) could not afford land titling due to the expenses involved. Land titling is expensive because there is no standard fixed cost set by the government to regulate all actors involved in the titling process. The shortage of registered surveyors in the country equally exacerbates the problem. Often private surveyors are extremely expensive and unaffordable to most citizens. Reliable information from the Uganda Surveyors Registration Board shows that by 2011, there were only 35 registered surveyors in Uganda. All

these surveyors had their offices located in the capital city - Kampala. It's estimated that 29.09 million people (85.3%) reside in rural areas (UBOS, 2012) where access to surveying, infrastructure and other services are missing.

Figure 30: Problems Faced in Acquiring of Land Titles (n=381)



Source: Survey data

About 17.6% (67 respondents) do not know the procedure for land registration / titling. Lack of transparency in land registration process aggravates weak land governance in Uganda. As a result, there is a lot of public outcry about the land registration department reported to be one of the most corrupt government department in Uganda. With financial support from the World Bank, the ministry (MHLUD) is currently developing a computerized Land Information System (LIS) which is aimed at reducing the number of forged land titles as well as eliminate corruption tendencies in the registry. MLHUD has also recently embarked on wide public awareness and information dissemination about the procedure for land registration in Uganda.

Other problems reported by about 11.2% (n=43) respondents include lack of ownership rights to register the land. Most of the land in Wakiso district is held under the Mailo land tenure system and is occupied mostly by tenants '*kibanja holders (kibanja in singular)*'. Tenants on Mailo land tenure cannot register their rights in land without approval of the landlord. Land titling even becomes more complicated were majority of the land is owned by absentee landlords. That implies that the *kibanja holder* (tenant) can only exercise user rights and hence less security of tenure. However the 1998 Land Act (Cap 227) provides for tenure security of tenants referred to as *bonafide occupants*. According to the Land Act, one becomes a bonafide occupant if he/she had occupied and utilized or developed any land unchallenged by the registered owner or agent of the registered owner for 12 years or more. However despite the presence of this legal provision, in reality, tensions continue to exist between landlords and tenants. The definition of rights accorded

to *bonafide* occupants in the 1998 Land Act (Cap 227) and all the subsequent amendments, lack legitimacy on part of the land owners (MLHUD, 2011:21), hence escalating violent land conflicts in Lake Victoria Basin.

8.3.7 Incidents of Land Conflicts

Land conflicts currently form the bulk of the caseload in the Ugandan courts, and are often the basis of crimes. More attention for “effective” preventive justice – a combination of measures to reduce the emergence of conflict over land and alternative dispute resolution is essential. For instance Zevenbergen *et al.*, (2012) suggest strengthening a pro-poor land recordation system as one way of preventing conflicts and facilitating preventive justice. When the pro-poor land recordation system is adhered to, such records can also enhance tenure security within families and communities (ibid) in Uganda. Table (19) shows the incidents of land conflicts in Wakiso district.

Table 19: Incidents of Land Conflicts in the Study Area

Variable	Number of Observations (<i>n</i> =381)	
	Frequency (f)	Percentage (%)
Have you ever experienced any form of land conflict?		
Yes	199	52.2
No	123	32.3
No Response	59	15.5
Who do you experienced the conflict with?		
Government Institutions (NEMA, NFA, etc.)	91	23.9
Private Investor	62	16.3
Family	175	45.9
Local Community	18	4.7
No Response	35	9.2
What type of land conflict is it?		
Boundary	81	21.3
Ownership conflicts linked to inheritance	157	41.2
Eviction by Government Agency	83	21.8
Eviction by Buganda Kingdom	0	0.0
Eviction by a Private Land Lord	56	14.7
No Response	4	1.0
Has the conflict been resolved?		
Yes	156	40.9
No	225	59.1
How was the land conflict solved?		
Family/ Traditional Court	89	23.4
District Land Office	7	1.8
Magistrate's Court	34	8.9
Out of Court Negotiations	26	6.8
Don't Know	0	0.0
Not yet solved	225	59.1

Source: Survey data

The findings revealed that 52.2% (199 respondents) had experienced some form of land conflict. Of all land conflicts, 45.9% were family conflicts related to inheritance and succession of family land. Inheritance and succession wrangles account for most of the domestic violence that often result into loss of life and destruction of property in many parts of Uganda. According to the finding 21.3% (81 respondents) had experienced boundary conflicts with neighbors. Boundary conflicts arise when boundary mark stones or major demarcation features (like trees, anthills) are deliberately or unknowingly removed from the land. Since most people don't have land titles that could clearly specify the parcel boundaries, tension between neighbors continue to widen and may escalate into more violent land conflicts.

According to the findings, about 23.9% (91 respondents) reported an increase in threats of eviction by State agencies such as the National Environment Management Authority (NEMA) and National Forestry Authority (NFA). For instance in May 2011, the Daily Monitor newspaper⁴⁶ reported that NEMA had evicted army veterans who had encroached on and degraded Lubigi wetland in Wakiso district. Hundreds of army veterans invaded the wetland and begun constructing make-shift structures for a local market. They claimed President Museveni "blessed" their encroachment. Lubigi is one of the major wetlands that attenuates and purifies urban waste water from Kampala before entering Lake Victoria and Lake Kyoga. Lubigi wetland helps to control floods and retain excess surface runoff from urban centers like Kampala.

With the evidence of increasing land conflicts in Lake Victoria Basin, it was important to investigate whether the reported conflicts have been solved and how they were solved. The findings show that most land conflicts (59.1%, 225) are not yet solved. Uganda's judiciary is grappling with a backlog of land cases with some unresolved cases as old as 7 years still pending in court. By the time the court allocates a date for hearing the case, it's often too late for reconciling the aggrieved parties especially under circumstances where the conflict resulted into death or massive destruction of property. In order to reduce the backlog of cases, the High Court of Uganda has established a specialized Land Division to handle all land matters. Unfortunately the judicial system is complex and is prone to manipulation by wealthy land grabbers and powerful politicians.

The legal process is expensive and often excludes the poor who are most prone to land grabbing. As a matter of fact, the public has lost confidence in the judiciary. Corruption and political influence in the judiciary interferes with fair justice. The poor are likely to be convicted and suffer double loss of land and legal costs while the rich grabbers are likely to be acquitted. As a result, 23.4% (89 respondents) preferred to solve their conflicts within the family or traditional clan court. This explains why only 8.9% of the cases were reported to be at court while about 6.8% preferred to be settled out-of-court. Lack of confidence in the judicial systems exacerbates civil unrest and promotes mob justice. Many families have lost lives and property due to mob justice emanating from land wrangles.

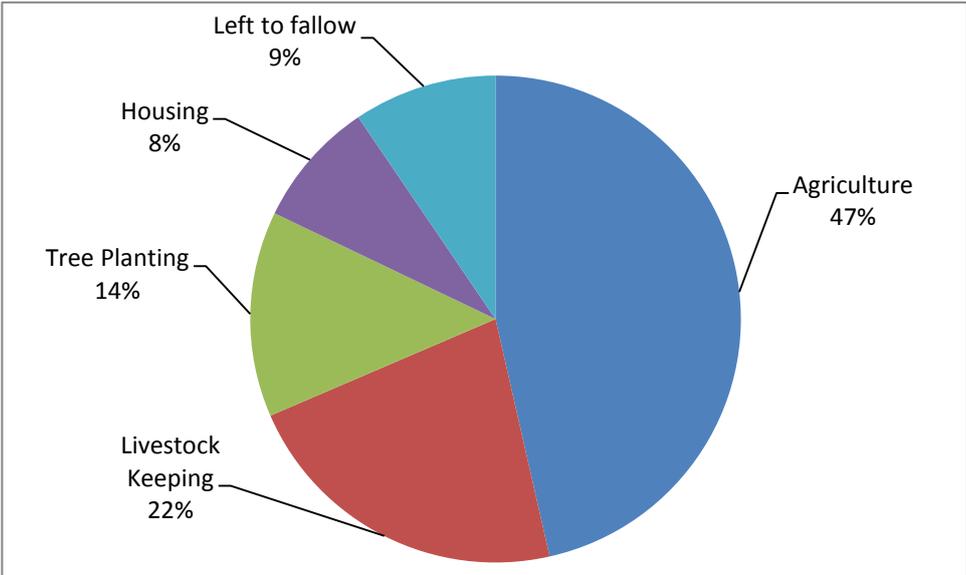
⁴⁶ Daily Monitor Newspaper, May 18 2011. *Lubigi Encroachers Face Eviction*: Accessed on 15 March 2013 from: <http://www.monitor.co.ug/News/National/-/688334/1164754/-/c1i131z/-/index.html>

8.3.8 Land Management Practices and Challenges

8.3.8.1 Major Land Use Types

The major form of land use is agriculture practiced by about 47% of the households. Most smallholder farmers practice subsistence farming with just a little surplus sold to local markets. The most commonly grown crops in the Lake Victoria Basin include coffee, bananas, beans, maize, sweet potatoes, cassava, vanilla, sesame among others. About 22% of the population uses land for livestock keeping. Animals such as cows, pigs, goats and poultry are commonly raised by most household. Although livestock keeping is still on small scale basis, the demand for meat and poultry products is ever growing especially within the regional markets of Southern Sudan, Rwanda, Kenya and the Democratic Republic of Congo. Despite the demand for livestock product, production is still low because livestock keeping require more investment in terms of labor, grazing land, water, veterinary services, etc. compared to subsistence farming which depends entirely on household labor.

Figure 31: Land Use Type in Wakiso District



Source: Survey data

According to the findings, only 14% of the land is used for tree planting. Tree planting is normally a long term investment mostly done by farmers who have access to more land and have a higher level of land tenure security. Most tree species for commercial timber require between 10-50 years. Its only farmers with a guaranteed security of tenure that can put certain part of their land to such long term tree projects. However with the intervention of NGOs and other extension services, farmers are slowly adopting agro-forestry tress species which can be mixed with other plants on the same garden. Farmers prefer nitrogenous fixing tree species which improve soil fertility. Commonly grown agro-forestry tree species include *grivellia robusta spp.*, *sesbania spp.*, *calliandra calothyrsus* some of which are used as fodder crops for livestock. Trees are also planted as land

management intervention measure to conserve soil from erosion. The trees provide timber for construction and firewood which is the main source of energy used by all rural populations.

The findings reveal that only 8% of the land is used for housing. There is a big housing deficit to match the ever growing population. Uganda has one of the highest population growth rates (of 3.2%) in the Eastern African sub region. Uganda's population has been projected to shoot from 34.5 million to 54.9 million by 2025. With a total fertility rate (TFR) of 6.7, scarcity of land and housing pose a major social dilemma especially for the rapidly urbanizing population. Unplanned urbanization is resulting into expansion of informal settlements within LVB. According to the findings, most slum houses are in poor conditions with no drainage and sanitary systems. However some wealthy politicians and foreigners have built beach houses along the shores of Lake Victoria despite the 200 meter protection zone required by law to protect the lake. In fact most beach developments are more than 200m in the lake instead of 200m from the lake. The lake is gradually being filled with earth to create more space for affluent settlers. Photo 5 illustrates such kind of developments in comparison to the typical slum housing located in Lake Victoria Basin.

Photo 5: Beach Houses and Slums are a Threat to Lake Victoria



Source: New Vision - May 7, 2013



Source: Author

8.3.8.2 Major Land Management Challenges

Most land management problems in Lake Victoria Basin emanate from the failure of institutions to implement land use plans and policies. For instance, most investor projects like flower farms have resulted into several negative environmental impacts on the lake and health of poor people but institutions such as NEMA (that are mandated to ensure that such investments are in compliance with environmental laws and policies) are weak and often suffer from political interference. Local governments that are supposed to implement local land use plans are corrupt and as a result development in ecologically sensitive areas continues to expand hence endangering Lake Victoria. Human activities such as bricklaying have altered the ecological functions of most wetlands. The ability of wetlands to purify water from effluents before entering the lake has been distorted by such activities. Wetland degradation has had a negative impact on Uganda's biodiversity hotspots. Wetlands host a rich diversity of fish especially cat fish (*Typha sp.*), birds like the crested cranes

and animals like statunga antelopes (*Tragelaphus spekii*) some of which are classified by the IUCN⁴⁷ as endangered species. Wetland plant species include Papyrus (*Cyperus Papyrus*) and common reeds (*Phragmites sp.*) which are particularly over harvested for building and crafts materials in Uganda.

Photo 6: Bricklaying in a degraded Lubigi Wetland in Wakiso District



Source: Author

Apart from wetland reclamation, there is a lot of deforestation in Lake Victoria Basin. Most trees are cut to make charcoal and firewood for sale. Over 80% of Uganda's population depends on wood fuels for all their energy needs. Wakiso district currently ranks second in deforestation in Uganda with over 86.7% forest cover loss (GoU, 2010b). If such unsustainable land management practices are not controlled, Lake Victoria Basin is bound to suffer more human induced climate change impacts which are a threat to food security and livelihoods.

8.4 Status of Water Rights in Wakiso District

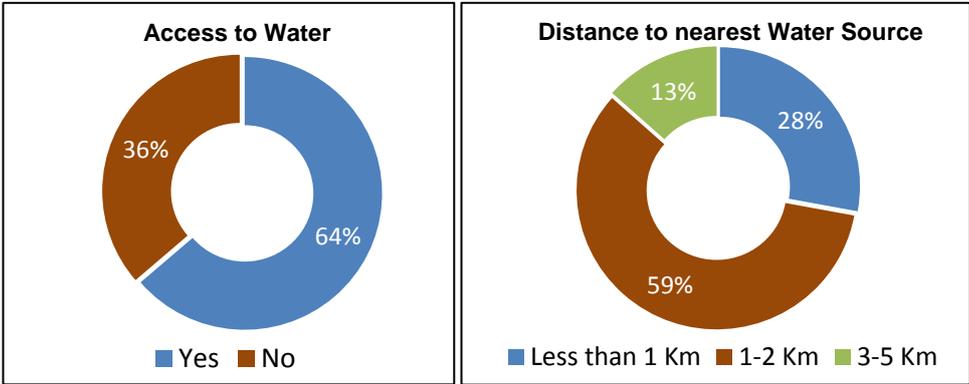
8.4.1 Access to Water and Distance to Nearest Water Source

The findings show that 64% (244 respondents) have access to water in Wakiso district. Unfortunately the quality of existing water sources is very poor due to pollution induced by human activities within Lake Victoria Basin. Similarly the quantity of water sources is decreasing due to prolonged droughts while the demand for water for domestic and industrial use is increasing due to the rapid population growth in LVB. About 36% (137 respondents) lack access to clean water in Wakiso district. Lack of access to clean water places a heavy workload especially on women and children who collect it from distant sources and who often have to wait for hours in queues. This practice results in children missing school and women having limited time for agricultural and other productive tasks (MWE, 2007). According to the findings about 59% (225 respondents) walk almost 1-2km to access the nearest water source while about 13% (49 participants) trek for more than 3km. The distance to the nearest water source is too long for women and children who take the central role of collecting water for the household. Owing to the long distances they travel to collect

⁴⁷ IUCN is the International Union for Conservation of Nature "internationale Union für die Bewahrung der Natur und natürlicher Ressourcen"

water, the average water use per capita is half the minimum recommended amount for drinking, cooking and adequate hygiene (MWE, 2007).

Figure 32: Access to Water and Distance to nearest Source in Wakiso District (n=381)



Source: Survey data

The findings show that only 28% (107 respondents) have water within a distance less than 1km. Many rural communities don't have access to piped water supply. The government through the Directorate of Water Development (DWD) embarked on improving rural water supply through construction of protected springs, boreholes and other gravity flow systems. Unfortunately many water supply schemes constructed at great costs with public funds are not properly managed and maintained - which greatly undermines government's efforts to provide vital water services to the people (MWE, 2007).

8.4.2 Types of Water Sources in Selected Sub-Counties of Wakiso district

Wakiso district has 3,942 domestic water points of which 154 have been non-functional for over five (5) years and are considered abandoned. The water points include boreholes, shallow wells, protected springs and rainwater harvesting tanks (DWD, 2010) as shown in Map 8. It was found that Wakiso district has 5 groundwater based pumped piped water supply systems that are privately operated. Four of the systems are functional while one is partially functional. The groundwater based pumped pipe systems serves approximately 33% of the population that has access to safe water while 67% is served by point water sources (DWD, 2010). The findings from 10 selected Sub-Counties of Wakiso show that most people collect water for domestic use from unprotected shallow wells. Shallow wells are normally 3-5 feet deep and hand dug by the community. Water from shallow wells can easily get polluted. Pollution from agricultural discharges, runoff, and animals easily gets in contact with unprotected shallow wells in most rural areas. It is therefore always advisable to boil all the water for drinking in order to reduce the risk of waterborne diseases like typhoid, dysentery, and cholera, among others.

Map 8: Distribution of Water Sources in Wakiso District

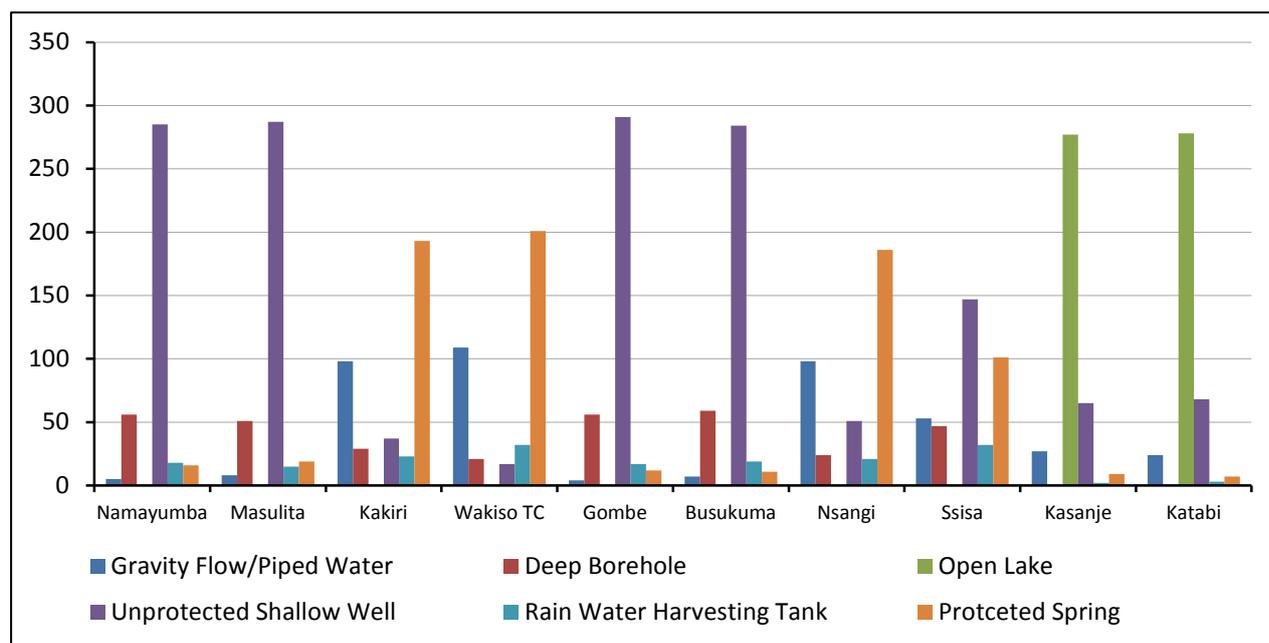


Source: DWD, 2010

Figure 32 illustrates the distribution of unprotected shallow wells in selected sub-counties of Wakiso district in Lake Victoria Basin. Based on the findings, the sub-counties which are more prone to waterborne diseases spread from unprotected shallow wells include Namayumba, Masulita, Gombe and Busukuma. Residents in Kasanje and Katabi sub-counties have direct access to Lake Victoria as their main source of water for domestic use. It is now evident that most industries directly discharge their wastes in the lake. Pollution of Lake Victoria increases health risks of most people who depend on it for survival. Recent media reports have highlighted that diseases such as cholera, bilharzia and malaria are increasing, especially where the water has become polluted. In addition to this, conflicts over resources such as fishing grounds, wetlands and forests within Uganda and across the country are likely to increase⁴⁸.

⁴⁸ See The New Vision, April 02, 2013 *Lake Victoria could soon be history*: Available online at: <http://www.newvision.co.ug/news/641258-lake-victoria-could-soon-be-history.html>

Figure 33: Distribution of Unprotected Shallow Wells in Selected Sub-counties (n=381)



Source: Survey data

8.4.3 Distribution of Water Sources in Selected Sub-Counties

The findings from the selected sub-counties (i.e. Namayumba, Masulita, Kakiri, Wakiso Town Council, Gombe, Busukuma, Nsangi, Ssisa, Kasanje and Katabi) show that the main water points include protected springs, deep boreholes, unprotected shallow wells, rain water harvesting tanks, gravity flow/piped water systems and open access from the lake. According to the findings, Wakiso Town Council has the biggest access (28.6%) to groundwater based pumped piped water system. This is followed by Kakiri and Nsangi sub-counties that have about 25.7% piped water coverage.

Table 20: Distribution of Water Sources in Selected Sub-Counties of Wakiso District

Sub-County of Interest	Gravity Flow/ Piped Water		Deep Borehole		Open Lake		Unprotected Shallow Well		Rain Water Harvesting		Protected Spring		Total Obs (n=381)
	Obs (n)	%	Obs (n)	%	Obs (n)	%	Obs (n)	%	Obs (n)	%	Obs (n)	%	
Namayumba	5	1.3	56	14.7	0	0.0	286	75.1	18	4.7	16	4.2	381
Masulita	8	2.1	51	13.4	0	0.0	288	75.6	15	3.9	19	5.0	381
Kakiri	98	25.7	29	7.6	0	0.0	37	9.7	23	6.0	194	50.9	381
Wakiso TC	109	28.6	21	5.5	0	0.0	17	4.5	32	8.4	202	53.0	381
Gombe	4	1.0	56	14.7	0	0.0	292	76.6	17	4.5	12	3.1	381
Busukuma	7	1.8	59	15.5	0	0.0	285	74.8	19	5.0	11	2.9	381
Nsangi	98	25.7	24	6.3	0	0.0	51	13.4	21	5.5	187	49.1	381
Ssisa	53	13.9	47	12.3	0	0.0	148	38.8	32	8.4	101	26.5	381
Kasanje	27	7.1	0	0.0	277	72.7	66	17.3	2	0.5	9	2.4	381
Katabi	25	6.6	0	0.0	278	73.0	68	17.8	3	0.8	7	1.8	381

Source: Survey data

Obs (n) = Number of Households Observed

The National Water and Sewerage Corporation (NWSC) piped water supply system mainly covers Entebbe Municipal Council and some parts of Katabi, Nangabo and some parts of Nabweru sub-

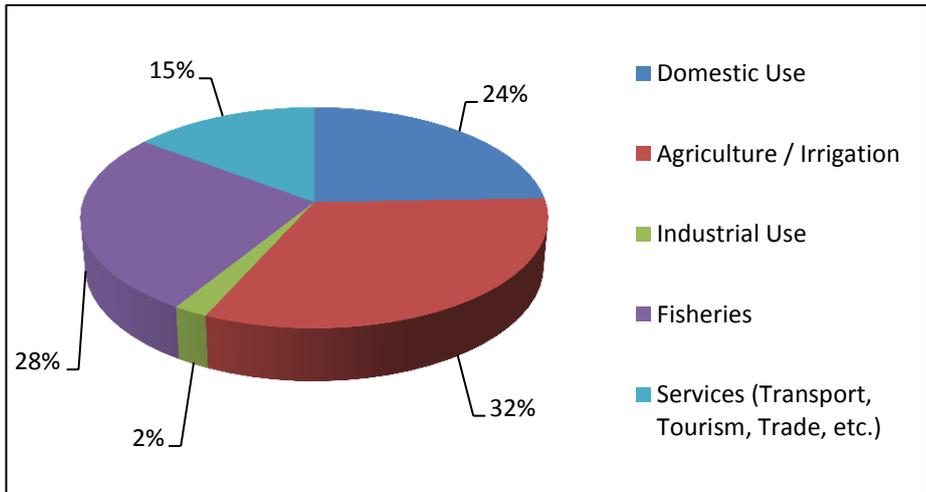
county. According to DWD (2010) Entebbe area is one of the affluent and highly urbanized centers under the auspices of the National Water and Sewerage Corporation (NWSC). It has a total population of about 76,500 people and NWSC serves about 51,617 people. This translates into water coverage of 68%. The water is pumped from Lake Victoria and led to one water treatment plant with a practical capacity of 20,000 m³ per day and an average production of 11,389 m³ per day. The area has a pipe network of about 167 km that extends to Kajjansi on Entebbe-Kampala road and serves Kakungulu Akright Housing Estate.

8.4.4 Water Management Practices and Challenges

8.4.4.1 Major Water Uses in Lake Victoria Basin

According to the finding, agriculture is the major use of water from Lake Victoria (32%). Lake Victoria Basin has fertile soils that basically support the growth of most cash crops like coffee, tea, tobacco, sugarcane and cotton as well as a number of food crops like bananas, rice, potatoes, beans and maize among others. Lake Victoria Basin remains the food basket of East Africa although more than 20 commercial flower firms located within the shores threaten the lakes existence. The flowers are mainly grown in green-houses and heavily depend largely on irrigation water from the lake. According to the April 23, 2013 New Vision newspaper, flower farming is one of the most chemical-intensive agricultural ventures which have polluted Lake Victoria. Some of the flower farms have expanded beyond the 200 meters protected area of the lake which is against the law. Lutembe wetland found in Wakiso district is one of the few wetlands of international importance designated as a Ramsar site under the Ramsar Convention of 1971. Incidentally the wetland today houses about five flower farms including Melissa, Aurum Roses, Ugarose, Expressions and Rosebud Ltd. Some sections of the farms are barely 30 meters from the lake in contravention of environmental protection laws that require a buffer zone of at least 200 meters⁴⁹.

Figure 34: Lake Victoria Water Uses in Wakiso District (n=381)



Source: Survey data

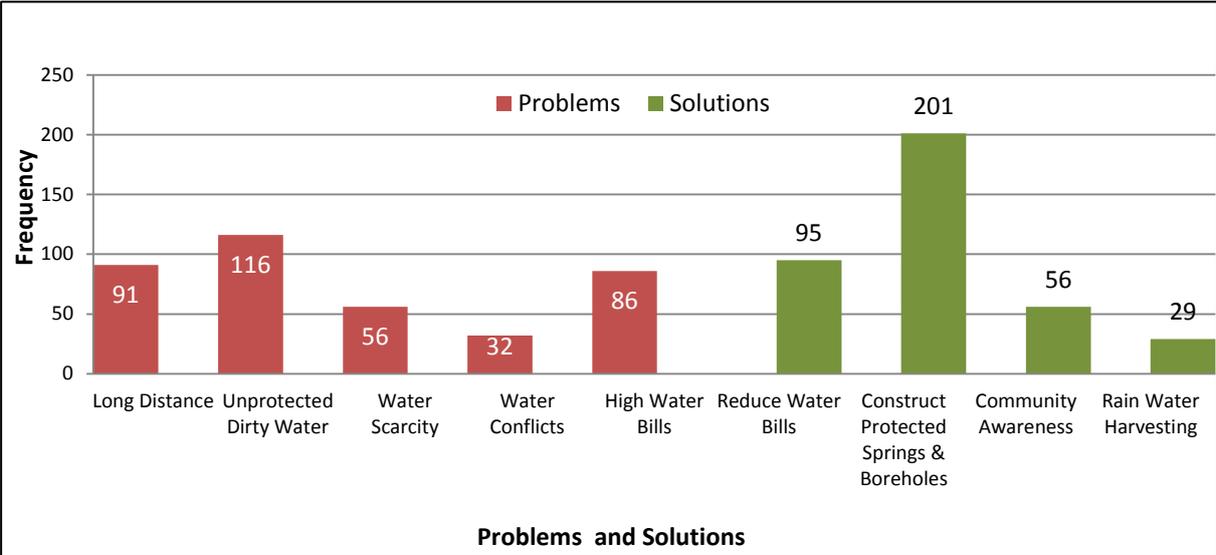
⁴⁹ See New Vision, April 23, 2013 Flower farms drive fish away from Lutembe. Accessed May from: <http://www.newvision.co.ug/news/641936-flower-farms-drive-fish-away-from-lutembe.html>.

The findings show that 27% of Lake Victoria water supports fisheries while domestic water use accounts for 24%. The lake also supports marine transport tourism and trade (15%). The EAC Partner States have agreed upon a number of regulations to promote maritime safety on the lake. Although industrialization still accounts for a low percentage (2%), a number of agro-processing industries such as breweries, fish factories, turneries and a few light steel works which require a lot of water and constant hydroelectricity power are on the rise in Lake Victoria Basin.

8.4.4.2 Major Water Problems in Wakiso district

According to the research findings 30.4% (n=116) respondents complained about contaminated water mostly from unprotected shallow wells. Most water obtained from shallow wells has a dirty brown color and sometimes comes with a bad smell. The water table in Wakiso is a few feet deep and pit latrines “hand dug toilets” used by most rural communities directly get in contact with the groundwater leading to bacterial contamination. The presence of fecal coliform bacteria in most unprotected shallow wells and springs signify a high risk of waterborne diseases such as cholera, typhoid and dysentery.

Figure 35: Problems faced in Accessing Water and Suggested Solutions (n=381)



Source: Survey data

Scarcity of safe water supply has been aggravated by the increased contamination of Lake Victoria. The lake is a recipient of increased concentrations of nitrogen and phosphorous, washed down from the surrounding plantations of tea, sugarcane, and coffee. Pollution has led to invasion and rapid domination of a dangerous waterweed-water hyacinth that kills fish and affects water quality (NEMA, 2002). The accumulation of phosphorus and nitrogen nutrients in Lake Victoria have resulted into a rapid growth of toxic blue-green algae (cyanobacteria) which once it decomposes in water, it releases toxins that may cause harmful effect on humans and animals. Reduction in drinking water quality requires increased investment in water treatment and purification. These costs translate into increased domestic water bills which is a major problem reported by 22.6% (n=86) of the participants.

Photo 7: Example of Unprotected Shallow Wells Providing Water to Local Community



Source: Author

According to the findings, about 24% (91 respondents) complained about walking long distances to the collect water. According to most respondents in the past 10 years the distance to most water sources like springs has been increasing as nearby water sources dry up due to prolonged droughts. Prolonged droughts have resulted into increased water scarcity reported by 56 respondents (14.7%). The growing water scarcity has accelerated water-user conflicts in the community. The long queues at communal boreholes and springs are associated with constant fighting and quarrels especially among women and children who spend long hours under the scorch sun lining for water. At least 8.4% (32 respondents) reported having been involved in a water related conflict in the past 6 months.

8.4.4.3 Suggested Solutions by Respondents

Over 52.7% (201 respondents) suggested the need for construction of more protected springs and deep ground water boreholes as an alternative to surface shallow wells. However, NEMA (2002) cautions that there are risks associated with the use of groundwater. If the demand outstrips the supply, the groundwater level can easily fall, resulting in more boreholes drying up. Another risk of uncontrolled use of groundwater is that it can become contaminated especially if pit latrines are dug close the water table. Regarding the increasing water bills, about 24.9% (95 respondents) request the government through National Water and Sewerage Corporation (NWSC) to reduce water bills and increase coverage of piped water supply. Worse still even where NWSC has supplied piped water, it is unreliable and at times gets disconnected especially when there is no hydroelectricity power supply that is used to pump and boost water transmission. Also continuous breakdown and leakages in transmission pipes result in a lot of water losses which at the end are transferred to the consumers through increased water bills. Recently the government (GoU) has introduced a VAT of 18% on water as a way of increasing government revenue. This implies that many people may be excluded from accessing safe water while those with piped water resort to

unprotected sources due to costs. This will finally lead to increased outbreak of waterborne diseases which in turn will affect government expenditure on public health.

The government should instead promote and support relatively inexpensive ways of providing safe water for instance through Rain Water Harvest (RWH). The findings however show that only 7.6% (29 respondents) had rainwater harvesting tanks. There is considerable potential for water harvesting as a localized means of providing access to water, however, financing and management of non-centralized system of tanks and pipes remain a challenge for utilization of rain as a water resource (NEMA, 2002). Worse still, water handling and storage is often unhygienic, resulting in water from safe sources becoming contaminated by the time it is consumed (MWE, 2007). There is therefore an urgent need for increasing public awareness on better management and the use of scarce water resources as mentioned by 14.7% (56) respondents.

8.5 Community's Awareness of Rule and Regulations Governing Lake Victoria

The study investigated local people's level of awareness about the existing formal and informal rules and regulations governing Lake Victoria. The findings are summarized in Table 21.

Table 21: Awareness of Rules and Restrictions Governing Lake Victoria

Variable	Number of Observations (<i>n</i> =381)	
	Frequency (f)	Percentage (%)
Aware of Restrictions to accessing L. Victoria		
Yes	242	63.5
No	139	36.5
Type of Government Restrictions		
Permission to water cattle / animals	138	36.2
Need Irrigation Water Permit	4	1.0
Ground water permit to construct water works	0	0.0
Fishing Regulations	201	52.8
Don't Know	38	10.0
Types of Rules		
Customary Rules and Practices	245	64.3
Water Use Group Rules	91	23.9
Local Government By-Laws & Rules	26	6.8
International Environment Laws	6	1.6
Don't Know	13	3.4
National Laws/ Polices known to Respondents		
Constitution	103	27.0
Land Act	67	17.6
Water Act	56	14.7
National Forestry and Tree Planting Act	17	4.5
National Land Policy	88	23.1
National Land Use Policy	35	9.2
National Water Policy	15	3.9

Source: Survey data

According to the findings, about 63.5% (242 respondents) are aware that there are several existing rules and regulations governing the use LVB resources although they never comply with them. About 36.5% (139) of the population is not aware of these restrictions for using the lake. These respondents believe that Lake Victoria is a God given resource which should not be restricted from anyone.

8.5.1 Formal Rules and Regulations Governing Lake Victoria

The findings show that among the fishing communities, over 52.8% (201 respondents) are aware of the fishing regulations imposed by the government on Lake Victoria. According to the National Fisheries Policy-2004, the Department of Fisheries Resources (DFR) under the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) is responsible for setting and enforcing standards and regulations for practices pertaining to fisheries (MAAIF, 2004). Regulations are aimed at reducing illegal fishing and use of illegal fishing gears that capture immature fish. Over fishing and catching of immature fish is accelerating depletion of Lake Victoria fish stocks. Recently, the President of Uganda endorsed a proposal by Mukono district leaders to impose a fishing ban on Lake Victoria between July to October every year with a target of ensuring sustainable mature fish⁵⁰. However according to Dr. Oguttu Ohwayo, a senior research officer at the National Fisheries Research Institute, *“the biggest challenge is how such a fishing ban will be implemented on a lake without definite boundaries. The fishermen would simply migrate to other parts of the lake and this may cause more conflicts”*. The ban should probably come from the government with consultation of all Partner States from a common lake basin organization like LVBC and LVFO.

Regarding national laws and policies, most respondents (27%) know about the Constitution as the supreme law, however most people are not familiar with the various Constitutional articles that specifically protect land and water resources. About 17.6% (67 respondents) are aware of the 1998 Land Act as the law that protects *bibanja holders* (tenants) while 14.7% (56 respondents) had heard about the 1997 Water Act. A big number of respondents (23.1%) had some knowledge about the draft 2011 National Land Policy (NLP). However, there was wide confusion regarding the difference between the 2007 National Land-Use Policy (NLUP) and the 2011 National Land Policy. This is because the formulation of the NLUP had very little stakeholder participation while the drafting of the NLP involved wide grassroots consultations. A number of other sectoral laws like the 2003 National Forestry and Tree Planting Act are barely known to the local people. The low level of awareness (4.5%) about the Forestry Act partially explains why there is rampant deforestation within Lake Victoria Basin. There is a common traditional saying among the Basoga people living on the lake shores that *“emiti gyamera gyene”* literally meaning, trees naturally grow even when they are cut down. Other regulations on Lake Victoria include effluent standards set by NEMA to reduce the amount of effluents from agriculture and industrial activities discharged into the lake.

⁵⁰ See New Vision, May 10, 2013 Museveni endorses ban on fishing. Available online from: <http://www.newvision.co.ug/news/642570-museveni-endorses-ban-on-fishing.html> (accessed 10 May 2013)

According to the findings, 36.2% (138 respondents) are aware of the restriction for not watering animals like livestock in certain parts of the lake. Through decentralization, Local Governments are also allowed to set by-laws and standards for governing Lake Victoria resources. About 6.8% (26 respondents) are aware of these local by-laws set by Wakiso District Local Government to protect the lake resources. Despite the formation of a National Fisheries Taskforce (NFT) comprising of officers from the Department of Fisheries Resources (DFR), Uganda Police, Uganda Revenue Authority, Beach Management Units (BMUs) and the Uganda Fish Processors and Exporters Association (UFPEA) enforcement and compliance of regulatory and control systems is still a major challenge.

Regarding international environmental laws and principals governing major transboundary water resources like Lake Victoria and River Nile, only 1.6% (6 respondents) were aware of these principles. The reason behind this low level of awareness is that most international laws are written in a legal language which is very difficult for most local people to understand - yet still they are not widely implemented by Partner States. Although the GoU is a signatory to most of these conventions, implementation is still lacking. Secondly most rural people in LVB especially fishermen have very low levels of literacy. The high illiteracy rates make it even more complicated to understand the national laws. That's why they easily identify with traditional land and water use customs that are inculcated in them from childhood.

8.5.2 Informal Rules /Indigenous Knowledge and Values in Lake Victoria Basin

According to the findings, a number of indigenous knowledge and values are practiced in Lake Victoria Basin. These values form core part of the informal rules and regulations governing LVB resources. Most respondents are aware of these customs and norms since they are practiced from childhood. About 64.3% (245 respondents) are aware of these indigenous practices that have been passed on for many decades. For instance, in Buganda Kingdom, it is widely believed that the formation of Lake Victoria is connected to supernatural powers of a god of the lake "*Mukasa w'Enyanja*". *Mukasa w'Enyanja* is one of the many Buganda Kingdom gods "*Lubaale*" believed to have supernatural powers over child birth/women's fertility, fishing, wealth, etc. The lake therefore became locally known as "*Nalubaale*" (indigenous name before it was named Lake Victoria in memory of the Queen of England). Till today, the Buganda King "*Kabaka*" and his subjects often perform cultural rituals on Lake Victoria. As a tradition fishermen are required to return some live fish back to the lake waters immediately after fishing in order to get the spiritual blessings to be able to fish on the lake another time. This traditional belief was aimed at restoring fish stocks and saving the lake from depletion. Many other similar customs like child naming and dedication, customary marriage rituals, etc. are still practiced by many local communities living in Lake Victoria Basin.

8.6 Emerging Climate Change Issues in Lake Victoria Basin

Climate change has adversely affected the livelihoods of many people in the Lake Victoria Basin. Increased droughts, seasonal flooding and landslides are among the common environmental risks within the region. The impact of climate change on the lake has resulted into rapid decline in water levels. Since 2002, Lake Victoria has registered a sharp decline in its water levels of more than 2.0 meters. This situation is likely to continue, if no immediate and appropriate interventions are made. The decline has had significant negative impacts on the social, economic, cultural and ecological aspects in the whole region. It has also generated a lot of issues, conflicts, challenges and debates (NAPE, 2006). The sharp decline in water levels accompanied by an increase in water temperatures has significantly affected major fish breeding sites on Lake Victoria. More than half of the respondents (51.7%) reported that there has been a sharp decline in fish stocks. The decline is attributed to over fishing and use of illegal fishing methods like illegal nets and poison to capture immature fish. The decline in fish stocks is also attributed to the rapid expansion of invasive waterweeds (hyacinth) as a result of increased pollution in Lake Victoria.

Photo 8: Sharp Decline in Water Levels in Lake Victoria



Source: NAPE

According to the findings in Table 22, about 37% of the respondents reported that water has become scarce in the past 10 years due to climate change. Most springs and boreholes have dried up and been abandoned. As a result, the distance to the nearest water source has been increasing over the past 10 years.

Table 22: Climate Change Effects in Study Area

Variable	Number of Observations ($n=381$)	
	Frequency (f)	Percentage (%)
Changes in Accessing Water in past 10 Years		
Water has become more scarce	141	37.0
More water use conflicts	15	3.9
More water use restrictions from government	23	6.0
Reduced Fish Stocks	197	51.7
Don't know	5	1.3

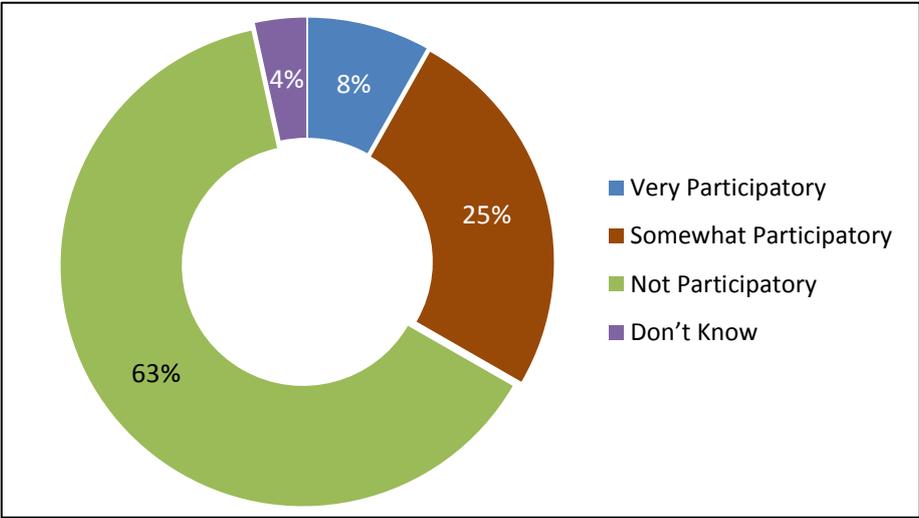
Source: Survey data

Long distances negatively impact on household labor and time that would be invested in productive economic activities like agriculture. The negative impact of climate change is grave on women who spend most of the time fetching water for household use. Water scarcity has also negatively affects school enrollment rates as most children in rural areas spend more time collecting water instead of attending school. The long distances affect the quantity of water collected for household. This has a big impact on household sanitation and health as water must be sparingly used. Water scarcity also escalates use conflicts (3.9%) and as a result, more restrictions (6%) have been introduced by the government to avert the crisis.

8.7 Participation of Local People in Legal and Policy Formulation

The findings in figure 35 show that most local people (63%) are not involved in legal and policy formulation regarding land and water management in LVB. For a long time, the government’s approach has been “top-down”. Mainly sector agencies have been responsible for initiation of policies that are tabled before Parliament for legislation while participation of local communities was rarely prioritized. With time, the GoU recognized that the key to successful implementation of the law lies among citizen participation in order to avoid noncompliance. However despite the significance of a multi-stakeholder participation, very few local people are involved in policy making.

Figure 36: Participation in Legal and Policy Formulation



Source: Survey data

The findings show that only 8% of the population was very involved in legal and policy formulation. In most cases, government agencies are highly selective in determining who to participate. As a result many informal institutions are rarely consulted. The failure to integrate indigenous knowledge and traditional conservation practices in the mainstream natural resources management and the practice of ignoring the rights of key stakeholders especially women and the youth who are the majority (NAPE, 2006) explains why there is a low compliance to most government laws and policies. For instance, in November 2009 the Buganda Kingdom openly

rejected the Land Amendment Bill and vowed to campaign against the law⁵¹. Following this campaign, many people in the Kingdom rejected the bill that was widely seen as protective to land grabbers. The situation could have been different if wide participation of all stakeholders in Buganda Kingdom was carried out.

8.8 Perception of Local People on Efficiency and Effectiveness of Government

The study investigated how local people perceive government services like the fight against corruption, recognition of customary land and water rights, dissemination of public information, transparency in the sale/lease of public land among other services in the land and water sector.

8.8.1 Assessing Government's Efforts in the Fight against Corruption

It was found that 78% (297) of the local population believe the government is very inefficient and ineffective in the fight against corruption. Participants cited several high corruption cases involving the Ministry of Lands, the Office of the Prime Minister, etc. Although strategies to fight corruption in Uganda take top positions in all government departmental strategic plans, the vice is outwardly expressed in most top government departments. Recent corruption scandals in the Office of the Prime Minister (OPM)⁵² resulted into suspension of up to US\$ 300 million promised in budget support up to 2013 by the European Union, United Kingdom, the World Bank, Austria and other donor countries. Other countries that have equally cut budget support to Uganda due to corruption include Germany, Belgium, Ireland and Sweden. Between 2010 and 2013, Germany alone had committed 120 million Euros to Uganda, 24 million Euros of which had been allocated to budget support. Much of the stolen funds were meant to improve livelihoods of poor communities to access food, healthcare, water and sanitation.

Table 23: Rating Government Efforts in the Fight against Corruption

Variable	Number of Observations (n=381)	
	Frequency (f)	Percentage (%)
Rating Government's efforts in fighting Corruption		
Very Efficient and Effective	11	2.9
Somehow Efficient and Effective	67	17.6
Very Inefficient and Ineffective	297	78.0
Don't know	6	1.6

Source: Survey data

However, 17.6% (n=67) of the respondents believe that the government is somehow efficient and effective in the fight against corruption. Although corruption is still part of the society, the government has set up institutions such as the Anti-Corruption Court and relevant laws like the 2009 Anti-Corruption Act aimed at fighting corruption. The Anti-Corruption Court has tried and sentenced high profile politicians including the former Vice President and ministers, among

⁵¹ BBC, 27 November 2009 "Buganda Kingdom rejects new Uganda land law". Accessed 18 February 2013 from: news.bbc.co.uk/2/hi/africa/8383253.stm

⁵² The Daily Monitor Newspaper, December 4, 2012 "Donors Cut All Direct Aid to Government until 2013"

others. However most high ranking politicians formerly implicated in corruption cases have been acquitted of all charges by the Anti-Corruption Court on grounds of absence of incriminating evidence to prosecute the accused politicians. This sends a negative impression to the public as a deliberate act to condone criminals due to political interference in the judiciary and outward weakness in the judicial institution.

8.8.2 Recognition of Traditional / Customary Land and Water Rights

According to the findings, 45.4% (173 respondents) ranked the government as somewhat efficient and effective while 25.2% (96 respondents) perceive the government as being very efficient and effective in recognizing traditional land and water rights.

Table 24: Recognition of Customary Land and Water Rights

Variable	Number of Observations (n=381)	
	Frequency (f)	Percentage (%)
Recognition of Traditional/ Customary Land and Water Rights		
Very Efficient and Effective	96	25.2
Somehow Efficient and Effective	173	45.4
Very Inefficient and Ineffective	67	17.6
Don't Know	45	11.8

Source: Survey data

The recognition of customary tenure by the 1995 Constitution is a major step by government in recognizing customary land rights in Uganda. Although the Constitution is silent about customary water rights, it is evident that in areas where customary land tenure is dominant, customary laws guide the management and use of communal water sources. However, the growing tenure insecurity and land grabbing especially on customary lands propels some respondents (17.6%) to rank the government as very inefficient and ineffective in recognizing their customary rights.

8.8.3 Dissemination of Public Information about Laws and Policies

The government was poorly rated regarding dissemination of public information on planned and existing laws and policies. 46.7% (178 respondents) ranked the government as very inefficient and ineffective. Most respondents lack knowledge about the existing laws and policies for managing land and water resources. According to Table 25, only 34.9% rated the government as somehow efficient and effective while 16% (61 respondents) perceive the government as very effective and efficient in dissemination public information especially through television, radios and the print media. However, there is a big gap in public information flow between rural and urban areas. The urban centers have more access to both electronic and print media while rural communities mainly rely on radios rather than newspapers since majority cannot read and write. While radios provide information to rural communities, very few households can afford to have a radio set. Field findings show that only a few households had access to radio and bicycle as household assets. In deep rural areas, information mainly circulates through word of mouth from one household to another.

Table 25: Dissemination of Public Information

Variable	Number of Observations (n=381)	
	Frequency (f)	Percentage (%)
Government disseminates public information on existing and planned laws and policies		
Very Efficient and Effective	61	16.0
Somehow Efficient and Effective	133	34.9
Very Inefficient and Ineffective	178	46.7
Don't Know	9	2.4

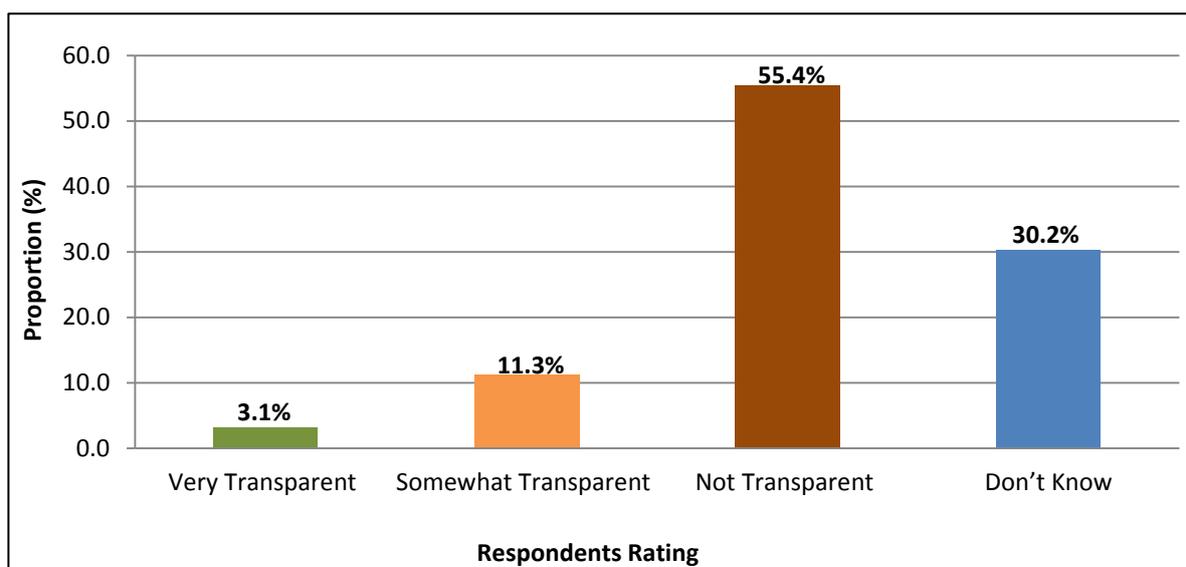
Source: Survey data

It's very unfortunate that even when laws and policies are disseminated by government, they are mainly written in English with only a few translated into local vernaculars. The legal terminology used cannot easily be understood even among the small literate population except among a few legal professionals.

8.8.4 Transparency in Sale or Lease of Public Land

According to the research findings, more than half of the population (55.4%) believes the government is not transparent when it comes to the sale or lease of public land. There are many scandals regarding unclear sale and lease of public land in Uganda. For instance, a couple of schools on public land have been demolished and the land reallocated to foreign investors to construct hotels and shopping malls. The government is keen to promoting Foreign Direct Investments (FDI) in land but the manner in which such land deals are awarded to foreign investors have awakened suspicion and wide public outcry in the country.

Figure 37: Transparency in Sale / Lease of Public Land (n=381)



Source: Survey data

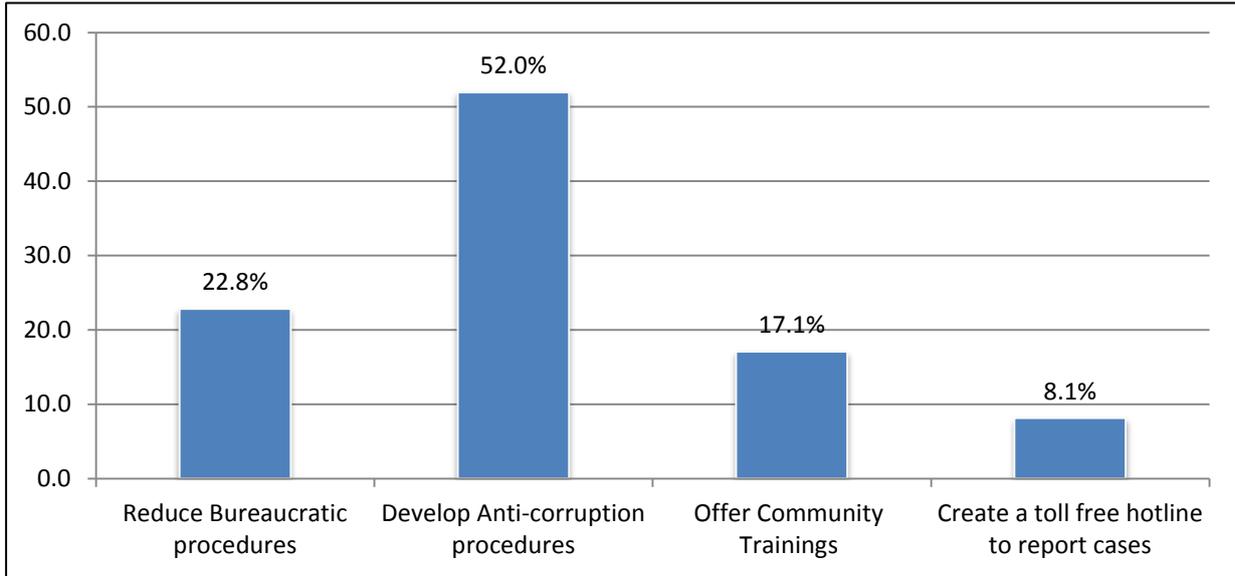
The findings show that about 30.2% of the respondents don't know how the government manages the sale or lease of public land in Uganda. Most FDI in land are highly confidential between the

government and investor. Under most circumstances the deals are hardly known to the public. The public usually gets to know about such land deals when the investor starts development and eviction of occupants on the land. The Uganda Land Commission responsible for management of public land has often been criticized by the media and Civil Society for leasing land to foreign investors without wide consultation with local communities that are likely to be negatively affected by such investment.

8.9 Local Suggestions for Improving Service Delivery in Public Institutions

According to the findings, majority of the local participants (52%) suggested the urgent need for government to develop anti-corruption procedures that will improve service delivery. Specifically the judiciary should retain its independence from undue influence from other arms of the government (especially the executive) so that there is no interference when handling corruption cases. This will avoid selective prosecution of a few corrupt victims as well as regain public confidence in the judicial system in Uganda.

Figure 38: Suggestions to Improve Service Delivery Government Institutions (n=381)



Source: Survey data

About 22.8% of the respondents suggested the need to reduce bureaucratic procedures especially when accessing land and water administration services. Bureaucratic procedures such as land titling exacerbate corrupt tendencies to flourish. On the other hand, corruption grows if the public continues to be silent about the evil. There is need for community awareness about the corruption evil as well as establishment of systems through which corruption tendencies can be freely reported by the local community without intimidation. About 17.1% of the respondents suggested the need for community training in anti-corruption skills. Some respondents (8.1%) suggested the need for a toll free hotline where citizens can freely report corruption cases to responsible authorities like the office of the Inspector General of Government (IGG). Absence of complaint

handling systems discourages most people especially in rural areas to report corrupt officials due to fear of victimization.

8.10 Chapter Summary

This chapter analyzed the status of land and water rights in Lake Victoria Basin. It was imperative to investigate how secure land and water rights in Lake Victoria Basin contribute to poverty alleviation in Uganda. Generally the findings from Wakiso district show that land and water are still the most important resources upon which most people depend for their livelihood. Over 80% of Uganda's population depends on land related activities either directly in form of agriculture, fishing and forestry or indirectly in form of tourism, agro-processing, and trade. In the case study area, 43% of the respondents were directly involved in agriculture while about 23% in fishing. Due to subsistence agriculture practiced by majority of the poor household, the average monthly income was found to be slightly above US\$ 100 per month while most household had less than 5 acres of land. Due to rapid population growth and the traditional land inheritance systems that promote land fragmentation in LVB, land has become scarce and as a result, conflicts regarding access to and ownership of land have rapidly increased in LVB. Lack of secure access to land simultaneously leads to lack of access to secure water rights. Coupled by the increasing incidents of corruption in both land and water sector, the livelihoods of the people (especially the poor) in LVB is at a risk. It was evident that weak land and water governance continue to flourish in LVB due to government's inefficiency to fight corruption in land and water institutions, weak legislations that often lack implementation, lack of public participation and awareness on legal and policy instruments for sustainable management of land and water resources, among others. According to the research findings, the respondents suggested possible ways through which delivery of land and water services can be improved especially in public institutions.

Chapter Nine: General Conclusions and Recommendations

This chapter presents the general conclusions of the study and suggests recommendations for improving land and water governance in Uganda. The study was set out to critically analyze the role of institutions in promoting secure land and water rights in Lake Victoria Basin (LVB) and how land and water rights contribute to sustainable livelihoods and poverty alleviation in LVB. The study also sought to evaluate the existing legal and policy frameworks for promoting good land and water governance in Uganda. Based on the evidence accumulated from the research findings, the conclusions presented in this chapter reaffirm the research hypothesis and synthesizes the various key findings presented in the previous chapters. Upon these conclusions, recommendations are drawn and suggestions are made for improving land and water governance in Uganda.

9.1 Emerging Land and Water Governance Issues in Lake Victoria Basin

As discussed in the previous chapters, there are many challenges facing land and water governance in Lake Victoria Basin despite the massive opportunities the lake basin can provide to its inhabitants. The existing challenges coupled by new emerging issues continue to threaten the livelihoods of many East Africans. Among the key emerging issues include threats posed by climate change on environment, human health, food security, human settlements, economic activities, natural resources, and physical infrastructure which are key factors for human development (LVBC, 2012). With abject poverty affecting more than 80% of the population living in LVB, this has accelerated the rate of rural-urban migration with its related negative impacts. The emerging land and water governance issues are discussed in the section below:

9.1.1 Climate Change and Environmental Risks

East Africa and the Lake Victoria Basin in particular are currently characterized by changing climate patterns which makes it difficult for communities to predict possible cycles of recurrence. The increased climate variability, coupled with the high dependence on the region's economies on agriculture and the unsustainable consumption of natural resources, has created the potential for dramatic negative consequences of global climate change (LVBC, 2011). It is certain that increased greenhouse gas emissions from the burning of fossil fuels and from land use change lead to a warming of climate, and it is very likely that these greenhouse gases are the dominant cause of the global warming that has been taking place since the industrial revolution, Climate change and variability is real and has severe impacts on SLM and hence influences how land management and farming systems are carried out as climate change adaptation and mitigation measures (LVBC, 2012). During the field survey, respondents in Wakiso district (one of LVB sub-catchment area in Uganda) reported an increase in environmental risks such as prolonged drought, heavy storms, and flooding which have negatively affected food security, human settlement, and other livelihood assets. The increase in temperatures and variability of

precipitation patterns are a great concern for East African countries where the link between climate and livelihood is very strong; hence frustrate poverty eradication programs in Partner States (LVBC, 2012). The impacts of climate change and variability have increased breeding of disease-causing vectors and increased incidences of hygiene-related illnesses such as cholera, typhoid and dysentery. There is need to develop innovative climate adaptive strategies that focus on supporting local communities to increase resilience to environmental risks such as drought, landslides, floods and diseases.

9.1.2 Declining Water Levels

Lake Victoria water levels have fallen by more than two meters since 2002 (LVBC, 2012). This has serious environmental, social and economic consequences. For instance, most hydro-power generation depends on Lake Victoria Basin water levels. Low water levels have become a serious economic burden especially for Uganda and Tanzania. In 2005, Uganda experienced a 30% decline in electricity production at the dams, resulting in frequent blackouts for some of Uganda's most densely populated urban areas, and frequent blackouts remain the norm today (ibid). The decline in water level also affects the functionality of boreholes which are alternative sources of safe water especially for rural communities. During the field research, respondents in Wakiso district reported that most boreholes that were constructed to extend water to rural areas were no longer functional. In Tanzania, the Mwanza Urban Water Authority was forced to shut down one of its three water intakes from Lake Victoria and use submersible water pumps to augment supply. Water supply to the city was reduced from 42,000 m³/day to 38,000 m³/day, an amount insufficient to meet the city's needs. Shipping and trade routes also have been affected, with large vessels no longer able to dock in previously accessible ports. In some cases, the ships cannot be loaded to full capacity or take trucks on board (LVBC, 2012). As water scarcity becomes more prominent in LVB, the risk for water-related conflicts posse a big threat to peace and stability in the region. Decline in water levels have also affected major fish breeding sites and have resulted into decline in fish stocks. This has exacerbated resource conflicts; for example, the conflicts between Uganda and Kenya over the small Migingo island in Lake Victoria.

9.1.3 Rapid Rural-Urban Migration

Lake Victoria Basin supports one of the densest and poorest populations in the world with population densities of over 100 persons / Km². It is estimated that by 2015, the population density in Lake Victoria Basin will be over 246 persons / Km². It was found that the total fertility rate (TFR) / the average number of children a woman can produce in Wakiso district was about 6.7. The high population growth coupled by the increasing scarcity of land is bound to escalate poverty in the region. LVB is experiencing rapid urbanization and development of informal settlements / slums. Rapid urbanization and its associated problems are worsened by the unregulated rural-urban migration. Currently there is no clear policy to control rural-urban migration. As a matter of urgency, there is need to develop regional and national policies that will reduce the influx of people moving from rural to urban areas. One of the immediate solutions

would be investing in comprehensive rural development so that people find all the necessary services such as schools, hospitals, infrastructure, better housing, etc. in rural areas rather than migrating to urban areas. There is need for immediate strategies to reduce rapid population growth through promotion of family planning and birth control methods as well as education (especially for the girl child) in order to delay and reduce early pregnancies.

9.1.4 Evaluation of Good Governance Principles in LVBC

An evaluation of good governance principles in LVBC is presented in Table 26. The evaluation is based on field findings and evidence from existing literature.

Table 26: Good Governance Assessment Matrix at a Glance

Good Governance Principle		Performance Range			Justification
		Weak	Medium	High	
Level of Participation	Formal Institutions		✓		While there is medium participation of formal institutions in LVB, the field findings (Fig.18) show that the level of participation of informal institutions is weak. There is no framework for adequate involvement of informal institutions in LVB resource management.
	Informal Institutions	✓			
Accountability			✓		According to the findings, LVBC uses a financial management system introduced in 2011 by the EAC to make EAC Organs and LVBC more efficient, effective and transparent. The system is designed to meet internationally accepted public sector accounting standards. However a lot of Technical Assistance is still needed to strengthen skills transferability.
Efficiency and Effectiveness			✓		
Transparency			✓		
Equity and Inclusiveness		✓			Land and water governance in LVB depends on ensuring that all people feel that they have a stake in LVB resource management. According to the field finding, exclusion of informal institutions and particularly the most vulnerable limits opportunities to improve pro-poor land and natural resource governance.
Consensus Oriented		✓			According to the field finding (sect, 7.8.4) Decision making is highly Top-Down. The sectoral Council of Ministers (CoM) unquestionably provides all policy directives, guides implementation and approves the terms and conditions of service for LVBC staff. All formal institutions similarly follow the same top-down decision making approach which is not consensus oriented.
Responsiveness		✓			Good governance requires that institutions and processes try to serve all stakeholders within a reasonable timeframe. LVB Commission instead deals with mainly formal institutions at the national level. Formal State institutions are not responsive enough to adequately involve informal institutions and serve all stakeholders in LVB.
Rule of Law		✓			Although the Legal Framework enshrined in the Treaty for establishment of the EAC and subsequent laws prescribes the Rule of Law, implementation is very weak in Partner States. The research findings (sect, 9.2.4) show that most national laws and policies are ambiguous, vague and sometimes obsolete, this makes proper implementation difficult. Despite the mandate given to LVBC to harmonize laws and policies regarding LVB in all Partners States, the findings (sect. 7.8.1) show very little success (<i>if any</i>) in this regard.

Source: Author

Land degradation and failure to realize the potentials of the LVB is a manifestation of the lack of adherence to the principles of good governance in the implementation of national policies and strategies and in the use of resources of the Basin (LVBC, 2012). A general assessment of good governance principles in Lake Victoria Basin Commission (LVBC) shows significant weaknesses at regional, national, county and lower levels within LVB. Although most EAC Partner States have established good governance structures starting at the lower levels, most structures are either not operational or suffer from capacity inadequacies.

9.2 General Conclusions

According to the research findings, land and water governance in Uganda is in a state of confusion. A number of institutions and legislations to manage land and water resources exist, but often contradict and conflict with each other. Most land and water governance reforms are reactive in approach due to increasing corruption, conflicts and land and water tenure insecurity in Uganda. Evidence from the research findings show that Uganda suffers from weak land and water governance. Weak governance flourishes due to complex, inconsistent and obsolete laws, fragmented institutional arrangements, weak participation of civil society and private sector, corruption in land and water sector, among other sources.

9.2.1 Tenure Insecurity

Weak governance means that land and water rights of the poor – especially women and children, are not protected. Majority of the poor living in Lake Victoria Basin are prone to land grabbing, land tenure insecurity, land and water conflicts, food insecurity, diseases among other challenges. The findings in Wakiso district show that 64% of land is owned by men. Women are marginalized and often their rights to land and water are not protected despite the presence of various laws against gender discrimination. Institutions such as the Ministry of Gender, Labour and Social Development, the Courts, etc. mandated to protect the rights of all social groups including indigenous minorities have done little to implement the existing legal provisions. Thus, the poor in particular are left marginalized and outside the law. It was found that over 94% of respondents do not have land titles. Absence of land titles coupled by unregulated informal land transactions accelerates insecurity of tenure. This implies that most poor land occupants are prone to evictions especially by rich land grabbers disguised as investors.

9.2.2 Fragmented Institutional Arrangements

Management of transboundary natural resources like Lake Victoria and River Nile fall under the responsibility of regional institutions of the East African Community such as Lake Victoria Basin Commission (LVBC), Lake Victoria Fisheries Organization (LVFO), Nile Basin Initiative (NBI), among other regional bodies. The findings however show that LVBC which is mandated to promote, facilitate and coordinate activities of different actors towards sustainable development and poverty eradication of the Lake Victoria Basin lacks a regulatory framework to guide the

participation of different stakeholders. Development actors including civil society organizations are at liberty to undertake any development interventions in the lake basin. This often results in duplication of activities, and misallocation of resources. At the national level, a number of fragmented institutions are involved in land and water governance in Uganda. National institutions responsible for land and water resources include government ministries like MHLUD and MWE together with other partner ministries. Other semi-autonomous bodies involved in land and water governance include NWSC, ULC, NEMA, and NFA among others. Most national institutions have contradicting mandates often resulting into conflicting interventions and misallocation of resources. There is poor coordination and information sharing among institutions. Since most heads of these institutions are political appointees, they often suffer from in-fighting and often decisions are made to please their appointing officer (normally the President of Uganda). For instance, on several occasions, the President of Uganda has presented strong arguments in favor of allocating land to investors in Mabira Tropical Forest Reserve located in Lake Victoria Basin in order to plant sugarcanes and develop industries. Despite the strong opposition raised by civil society, national institutions meant to protect these fragile resources have succumbed to pressure and degazetted parts of the forest reserves to provide land for large scale land based investments.

Evidence from the research findings shows that although a number of formal institutions are involved in land and water governance, there is no clear involvement of informal institutions such as cultural/ traditional organizations, religious organization, associations of indigenous minority groups among others. The Buganda Kingdom in particular from where the case study area (Wakiso district) is located does not have any relationship with Lake Victoria Basin Commission despite the significant role of the Kingdom in mobilizing and educating people on traditional land and water conservation practices based on clans, taboos, and norms. For instance in some of the fishing villages which were surveyed in Wakiso district, over 64% of the respondents practiced the traditional /cultural rules and regulations governing the use of Lake Victoria resources. According to the respondents, the lake and its basin resources are spiritual and divine in nature. The god of the lake "*Mukasa w'Enyanja*" has divine powers to bless, curse and punish those who wrongly use the lake. Based on such strong cultural beliefs, integration of cultural institutions in the governance of LVB resources would improve land and water governance systems.

9.2.3 Weak Participation of Civil Society and Informal Institutions

Due to increasing pressure presented by civil society and media groups demanding for accountability and strong punitive actions against corrupt officials, the government has recently devised means to regulate media and civil participation. On several occasions, many licenses of NGOs and media houses have been withdrawn by the government on accusation of inciting violence. For instance in 2009, tensions between Buganda Kingdom and the Central Government resulted into massive public demonstrations in which over 20 people were shot dead by

government armed forces. The cause of the conflict stems from the continuous demand for the return of the Kingdom's 9000 square miles of land currently held by the government. Most of this land is located in Lake Victoria Basin. The government reacted by switching off the Kingdom's Central Broadcasting Radio Station and imprisoning hundreds of people accused to participate in the riot. Recently, a controversial public order management bill⁵³ was passed by parliament seeking to regulate public meetings and use of public address systems, but has however been widely criticized by both human rights activists and political organizations saying it infringes on human rights and it's a replica of the already existing laws. Similarly the 2006 NGO Act is premised on an overbearing intent by the State to control the activities of NGOs and therefore provides for unfettered administrative discretion to the NGO Board and Minister of Internal Affairs to do so.

Article (2) states that '... upon registration, the NGO Board under the Ministry of Internal Affairs shall issue a certificate of registration to the organization, subject to such conditions or directions generally as it may think fit to insert in the certificate and particularly relating to: a) the operation of the organization; b) where the organization may carry out its activities; c) staffing of the organization'. If the State can exercise jurisdiction over operational issues for NGOs, including internal staffing issues, the geographical operating scope of NGOs, clearly NGOs cease to be autonomous civic organizations as provided for in the Constitution of the Republic of Uganda. Instead they simply become conformists unable to take full charge of their own activities, independently engage with the state and challenge socio-economic and political injustices (Uganda National NGO Forum, 2009).

9.2.4 Ambiguous National Laws and Policies for Land and Water Governance

The research findings show that although Uganda has well established legal and policy framework for governing land and water resources at various levels in the society, most laws and policies are ambiguous, vague and sometimes obsolete. The 1995 Constitution of Uganda which is the principle law upon which all subsequent legislations for governing land and water resources emanate has a number of ambiguities. According to the findings, one of the major legal ambiguities created by the 1995 Constitution under Article 237(1) and its subsequent Land Act of 1998 is vesting ownership of land entirely in the citizens of Uganda while Section 5 of the 1998 Water Act states that all rights in water are vested in the government.

From a farmer's point of view, land without water is of little use while most land use activities have a direct impact on both water quality and quantity. Since the Constitution vests land in the citizens of Uganda, citizens have often blocked public infrastructure developments especially where government has failed to offer adequate compensation as provided by the law. Although, the government retains possibilities to acquire land in the public interest through compulsory acquisition, lack of transparency in valuation and compensation procedures often

⁵³ See BBC News: <http://www.bbc.co.uk/news/world-africa-23587166>. Accessed 31/08/2013

lead to land conflicts between State and citizens. Due to chronic corruption in most State agencies, citizens have lost trust in government institutions that are mandated to carry out compensation. Most properties laws and policies are ambiguous, inconsistent and sometimes obsolete, sometimes they require interpretation by the Constitutional Court and this makes proper implementation difficult.

9.2.5 Confirmation of Research Hypothesis

According to the research findings, there is sufficient evidence to confirm the research hypothesis that;

Insecure land and water rights continue to prevail in Uganda due to lack of a regulatory framework to guide different stakeholders despite the presence of various formal and informal institutions to promote secure land and water rights in Lake Victoria Basin.

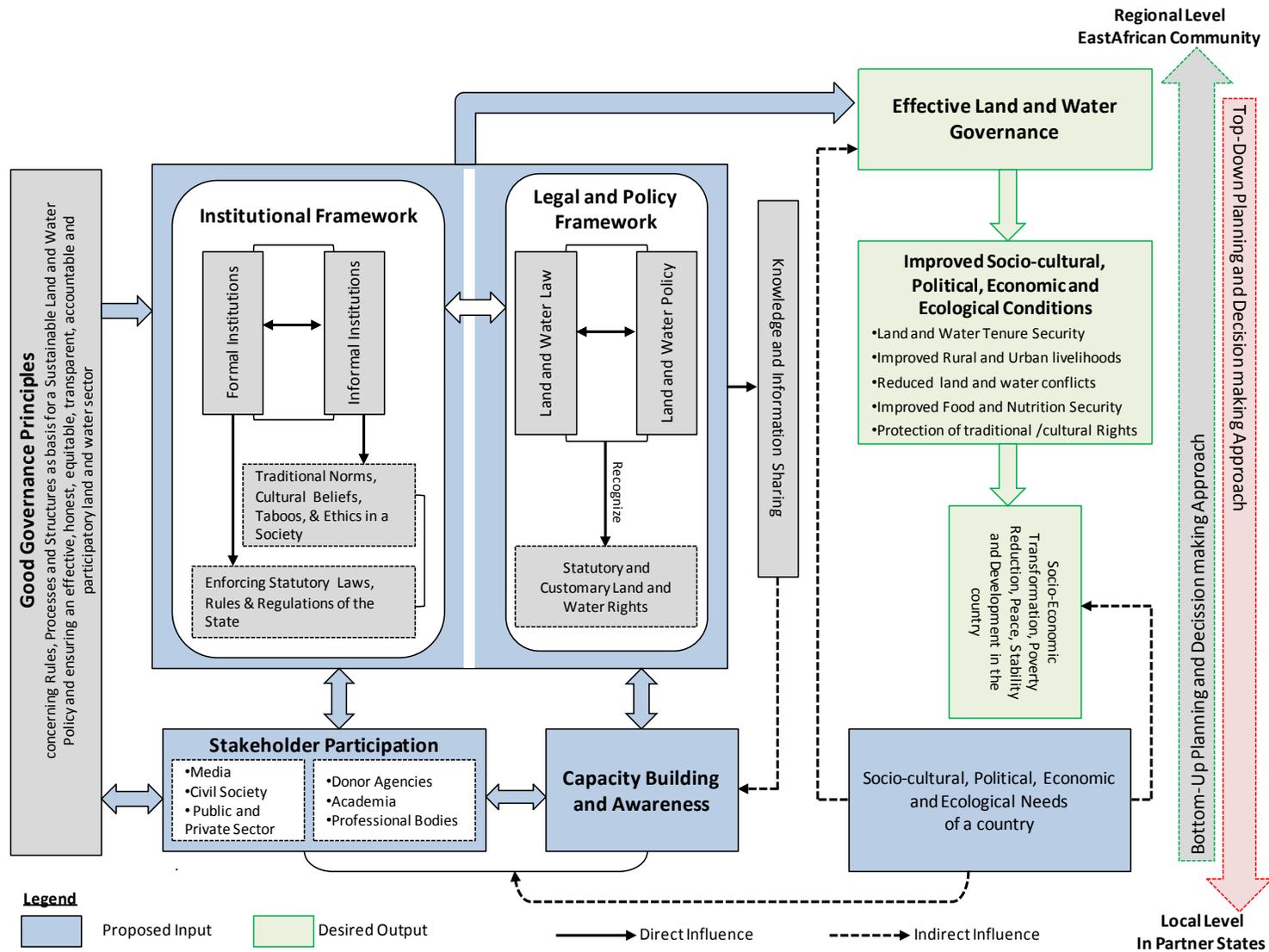
Research findings show that majority of the people in Lake Victoria Basin (e.g. in Wakiso district) in Uganda live in abject poverty due to insecure land and water rights exacerbated by weak institutions (e.g. LVBC, National Ministries) responsible for promoting effective land and water governance. Absence of a regulatory framework to guide stakeholder participation has resulted into an influx of formal and informal institutions with competing interests and some with motives to maximize exploitation of natural resources but with minimum or no regard to protecting the environment or improving the socio-livelihoods of poor people in Lake Victoria Basin.

9.3 Recommendations for Improving Land and Water Governance in LVB

9.3.1 Towards a New Model: a basis for practical solutions

According to the field findings and existing literature, there is undoubtable evidence that the East African region in general and Lake Victoria Basin in particular face numerous land and water governance challenges. The complex challenges include rapid population growth, rapid urbanization, increased demand for land, food and water resources, land tenure and energy insecurity, unsustainable land use practices, violent conflicts emanating from weak institutions and legislations for dispute and conflict resolution. All these complex challenges have an institutional dimension. Similarly emerging challenges such as climate change leading to prolonged droughts and other environmental risks and disasters like landslides, floods, emergence of diseases and invasive species on Lake Victoria require a new approach. To address these enormous challenges while exploring the massive opportunities of Lake Victoria Basin, this study recommends an integrated approach to governing land and water resources in LVB. This new approach is presented in the model for improving land and water governance in Lake Victoria Basin which is illustrated in Figure 38.

Figure 39: Model for Improving Land and Water Governance in Lake Victoria Basin



Source: Author

9.3.1.1 Model Explanation

The proposed model for improving land and water governance in LVB is based on a number of components that may directly or indirectly affect land and water sector in a country. According to the proposed model, the input components to achieve effective land and water governance include; a) *country's institutional framework* which comprises of both formal and informal institutions that guide formulation and enforcement of both statutory and customary land and water rights, b) *country's legal and policy framework*, c) *stakeholder participation* including the media, civil society, public and private sector, donor agencies, academia and professional bodies among others, d) *capacity building and awareness*, and e) *existing socio-cultural, political, economic and ecological needs of the country*. All these components are closely interrelated, for instance, it's almost impossible to have an efficient institutional framework without a strong and supportive legal and policy framework. Equally the effectiveness of the legal and policy framework depends on the nature of institutional framework through which rules and regulations can be enforced and implemented in a country. In the same way, effective stakeholder participation strongly depends on an inclusive institutional framework based on a strong and responsive legal and policy framework in the country. Capacity building and awareness is paramount in strengthening a country's institutional and legal /policy framework as well as promoting meaningful stakeholder participation. However these components can best interact with each other under good governance principles and knowledge and information sharing. For without good governance in land and water sectors, it is basically impossible to achieve good land and water governance.

According to the proposed land and water governance model, the outcomes of effective land and water governance can be seen in improved socio-cultural, political, economic and ecological conditions in a country. These conditions can be reflected in form of a) improved land and water tenure security, b) improved rural and urban livelihoods, c) reduced land and water conflicts, d) improved food and nutrition security, and e) protection of traditional/cultural land and water rights among others. The ultimate goal of promoting effective land and water governance is to achieve better socio-economic transformation, poverty reduction, peace, stability and development in the country. This is a common development goal enshrined in all EAC Partner States' Vision 2020 National Development Plans (NDP).

When planning for improvements in land and water governance, attention needs to be placed on ensuring that the institutional, legal and policy framework is strong enough and supported by a stakeholder participation and capacity development approach. The rest of this section discusses the need for strengthening institutional, legal and policy framework, improving stakeholder participation, providing adequate capacity building and awareness across all levels of governance as well as integrating socio-cultural, political, economic and ecological needs of the country in land and water governance reforms from an East African Community perspective.

- ***Strengthening Institutional, Legal and Policy Framework***

Based on the research findings presented in the previous chapters (7 and 8), the institutional and legal framework for land and water governance in LVB is generally weak. Land and water governance in LVB is in a state of confusion, the region is dominated by fragmented institutional structures which often conflict in decision-making process. At the national level in Uganda, priorities for capacity building mainly target formal institutions recognized by the State while many informal institutions that are equally important are often neglected. Much as formal institutions have the mandate to formulate land and water laws and policies as well as guide formal rules and regulations based on statutory laws, policies, and rules that are usually legitimized by the State, implementation and citizen's compliance to such statutory laws and policies is often weak. Local citizens easily comply with informal system of rules and decision making procedures that are often based on trust and derive their legitimacy through observing traditional norms, customs, taboos and cultural beliefs in the society.

The informal system of rules and decision-making procedures evolves from endogenous socio-cultural codes and gives rise to social practices, assigns roles to participants, and guides interactions among common pool resource (like communal land, water, forests and wetlands) users (Appiah-Opoku and Mulamootil, 1997). Some informal institutions have common religions and beliefs such as taboos and sacredness (Bhagwat and Rutte, 2006) which guide the manner in which land and water resources are owned, used and disposed. Socially land and water resources have spiritual and cultural dimensions for which most societies identify themselves with. Thus, different customs, norms, taboos and cultural beliefs regarding land and water use are informally passed on from generation to generation through socially acceptable traditional governance systems.

Traditionally most land and water governance rules and processes are undocumented but are widely known and practiced by the society. It's often believed that customary rights to land create a pathway to water-use rights in the community. Similarly, most land/water conflicts on customary lands are arbitrated through the traditional adjudication system comprising of traditional leaders (chiefs, clan heads and elders). Although traditional land and water governance systems are informal and often seen as inferior to statutory laws and policies of the State, experience on ground shows that societies easily identifies with the traditional governance systems compared to the conventional statutory laws of the State. It's therefore important to integrate informal institutions in planning and decision making processes aimed at promoting effective land and water governance.

Good (land and water) governance exists where the responsible government bodies establish effective policies and legal frameworks to allocate and manage land and water resources in ways that are responsive to national and relevant international, social and economic needs, and to the long-term sustainability of the resource base (UNESCO, 2006). The presence of weak land and water laws is major obstacle to effective land and water governance in Uganda

and entire LVB. Weak laws are normally vague, and lack a clear plan for implementation. The effectiveness of the legal and policy framework determines the efficiency of land and water administration and strengthens all other institutions for dispute and conflict resolution. The proposed model recommends the need for harmonization of regional and national laws governing land and water resources in LVB. A number of regional issues at the East African Community requiring land and water sector reforms at national level require harmonized regional laws that conform to national legislations and policies in Partner States. The process of harmonizing national laws and policies of the five Lake Victoria Basin States should be hastened and a joint report should be published and disseminated by Lake Victoria Basin Commission (LVBC).

- ***Improving Stakeholder Participation***

The model specifies the need for wide stakeholder participation in land and water governance. Land and water governance challenges [...] are typically complex, uncertain, and multi-scale. They affect multiple actors and agencies at all levels of governance (i.e. regional, national, and local). This calls for transparent decision-making that is flexible to changing circumstances, and embraces a diversity of knowledge and values. For this reason, stakeholder participation in decision-making has been increasingly sought and embedded into national and international policy (Reed, 2008). Stakeholder participation in land and water governance has increasingly become a democratic right and a prerequisite for achieving sustainable development. Active involvement of the civil society, media, private sector, professional bodies and even the local land and water users in collective planning and decision making enhances citizens' trust and confidence in government land and water reform programs. It is widely believed that stakeholder participation from local to national (and even beyond supra-national) level can promote equal participation of both men and women with knowledge and ability to articulate their interests and participate in decision making about matters that directly affect their lives (Miranda *et al.*, 2011). Civil society engagement in land and water governance can contribute to mobilizing finances, development of land and water infrastructure and capacity building of local communities to demand, develop and maintain water, sanitation and hygiene facilities. However, stakeholder participation needs to be guided by a clear regulatory framework. The framework should address priority issues of local, national and regional importance where various stakeholders can contribute towards. Absence of a regulatory framework may result into uncoordinated activities of stakeholders.

- ***Improving Capacity Building and Awareness***

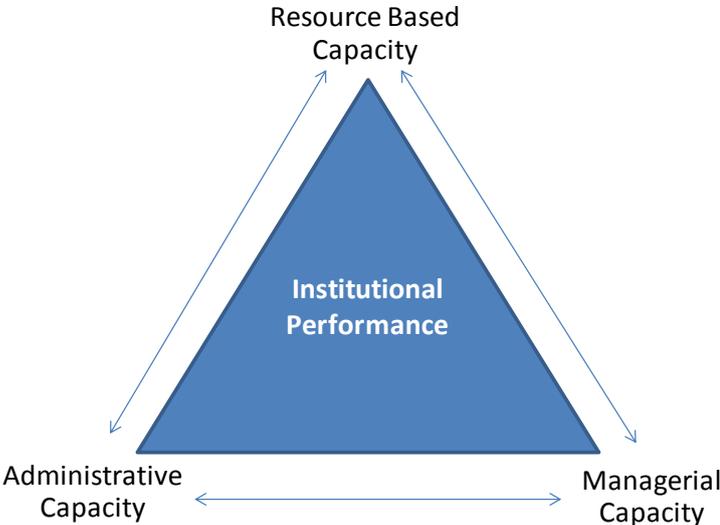
Capacity building is central to achieving effective land and water governance. Capacity building enhances the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainably (UNDP, 1998). Capacity building is necessary for conflict resolution especially in governance of transboundary resources which entails benefit sharing among Partner States. Integrating capacity building components in land and water management, service delivery, gender issues, and sustainability in land and water resources management

activities (UNDP, 2004b) is crucial in promoting land and water governance in a country. Individual capacity is one of the prerequisite for building institutional capacity. Strengthening individual capacity requires enhancing and upgrading the skills of all major stakeholders involved in formulation and implementation of land and water governance policies and laws. For capacity building interventions to be effective, an understanding of the different dimensions of capacity, preferably arrived at through a needs-driven participatory assessment, is necessary. In line with building institutional capacity and performance, Masum (2011) suggests three different dimensions; Resource Based, Managerial and Administrative Capacity.

- 1) Resource Based Capacity involves human resource, funding, technology and infrastructure
- 2) Administrative Capacity requires the ability to apply land/water administration policies and legislations in an efficient and effective way, as well as to support the competent decision-making process.
- 3) Managerial Capacity requires the ability to perform the functions with effective managerial process and proper coordination with other institutions / organizations (Masum, 2011).

These three dimensions of capacity that influence institutional performance are illustrated in Figure 39.

Figure 40: Dimensions of Capacity for Institutional Performance



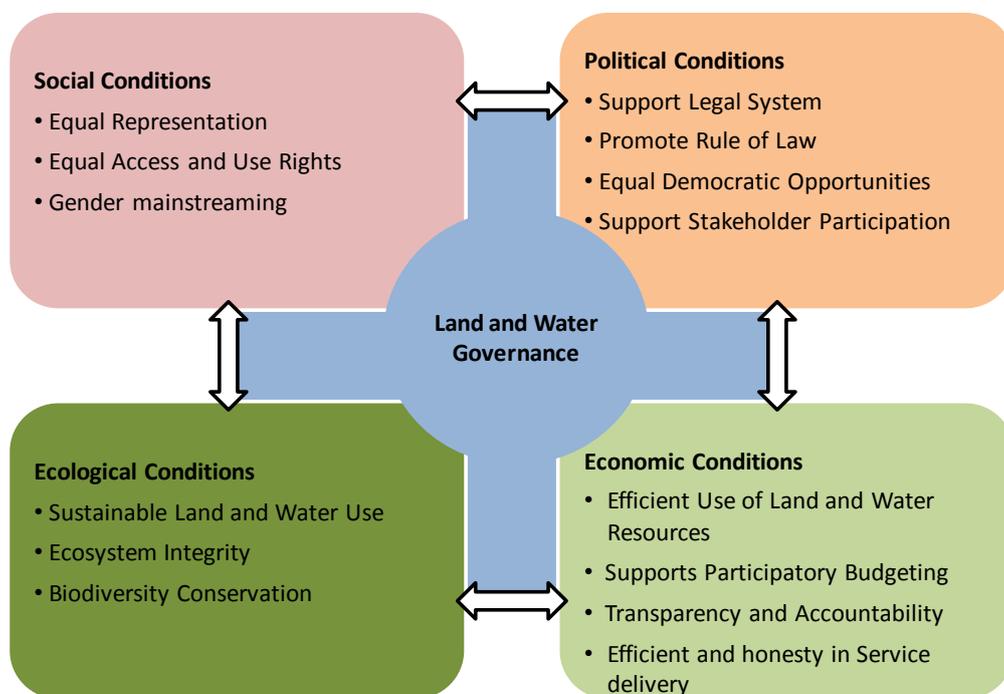
Source: Masum (2011)

The three dimensions equally apply in water administration; therefore both formal and informal institution can effectively carry out land and water administration services if their capacities are strengthened. Land and water governance in LVB is further constrained by low levels of awareness at national, district and local community level. Low awareness and inadequate involvement of local communities has greatly reduced the sense of ownership of projects by communities (LVBC, 2012). This model recommends improving capacity building and awareness at all levels in order to achieve effective land and water governance in LVB.

- **Integrating Socio-cultural, Political, Economic and Ecological Needs**

Effective land and water governance requires balancing the complex socio-cultural, political, economic and ecological needs of a country in all reform processes. Essentially, land and water governance is about power. Generally in every society, those who control power normally decide on ownership, access and use rights to natural resources like land and water, minerals, forests among others. The rights of the majority who entirely depend on natural resources for their livelihood and yet they are the most poor, powerless, marginalized and vulnerable require full protection enshrined in the country's legal framework. The power structure of society is reflected in the rules of land tenure as well as the quality of governance that can affect the distribution of power in society. These rules define how access is granted to rights to use, control and transfer land, as well as associated responsibilities and restrictions. They develop in a manner that entrenches the power relations between and among individuals and social groups. It is no surprise, therefore, that the elites and even the middle classes have stronger forms of land tenure, while the poor and vulnerable groups have weaker, more insecure forms of tenure (FAO, 2009). Therefore, it's essential to set a holistic view on society as a whole because factors such as political, culture, religion, the general legal framework, traditional and local institutions can support or undermine equitable land/water management (Sehring, 2005). Figure 40 illustrates these complex socio-cultural, political, economic and ecological needs which are often intrinsic factors for successful reforms in land and water sector.

Figure 41: Socio-Political, Economic and Ecological Needs in Land and Water Governance



Source: Author

In line with the paradigm of Integrated Water Resource Management (IWRM), the principles adopted by the Global Water Partnership (GWP) for IWRM are social equity, economic efficiency and environmental sustainability (GWP, 2000). Political will is necessary in fostering or hindering land and water governance reforms. It's almost impossible to achieve environmental sustainability, economic efficiency and social equity without political will. Experience shows that lack of political will is one of the major obstacles for achieving effective land and water governance. For example, a recent needs assessment survey of more than 250 practitioners around the world, undertaken by CIVICUS⁵⁴ Participatory Governance Programme, identified lack of political will as a principle obstacle in promoting participatory governance (Malena, 2009). Political will is needed when it comes to giving citizens and Civil Society Organizations (CSOs) a say in allocating public resources through participatory budgeting to promote economic efficiency. Political will can either suppress or strengthen stakeholder participation in advocating for transparent, accountable and gender inclusive land and water policies. Political will can however be influenced by pressure from below, as a result of grassroots level civic education, awareness raising and support to citizen-led advocacy (ibid).

9.3.1.2 Applicability of the Proposed Model in East African Community

The proposed land and water governance improvement model can be applicable in all the five East African Community Partner States (namely, Uganda, Kenya, Tanzania, Rwanda and Burundi) that share Lake Victoria Basin. These countries have a lot of socio-economic and environmental characteristics in common. The World Bank classifies all these countries as low-income economies based on their Gross National Income (GNI) per capita. More than half of the population in Lake Victoria Basin in all Partner States is living on less than US\$ 1 per day and heavily rely on subsistence production. Therefore all EAC Partner States share almost similar challenges regarding land and water governance in Lake Victoria Basin.

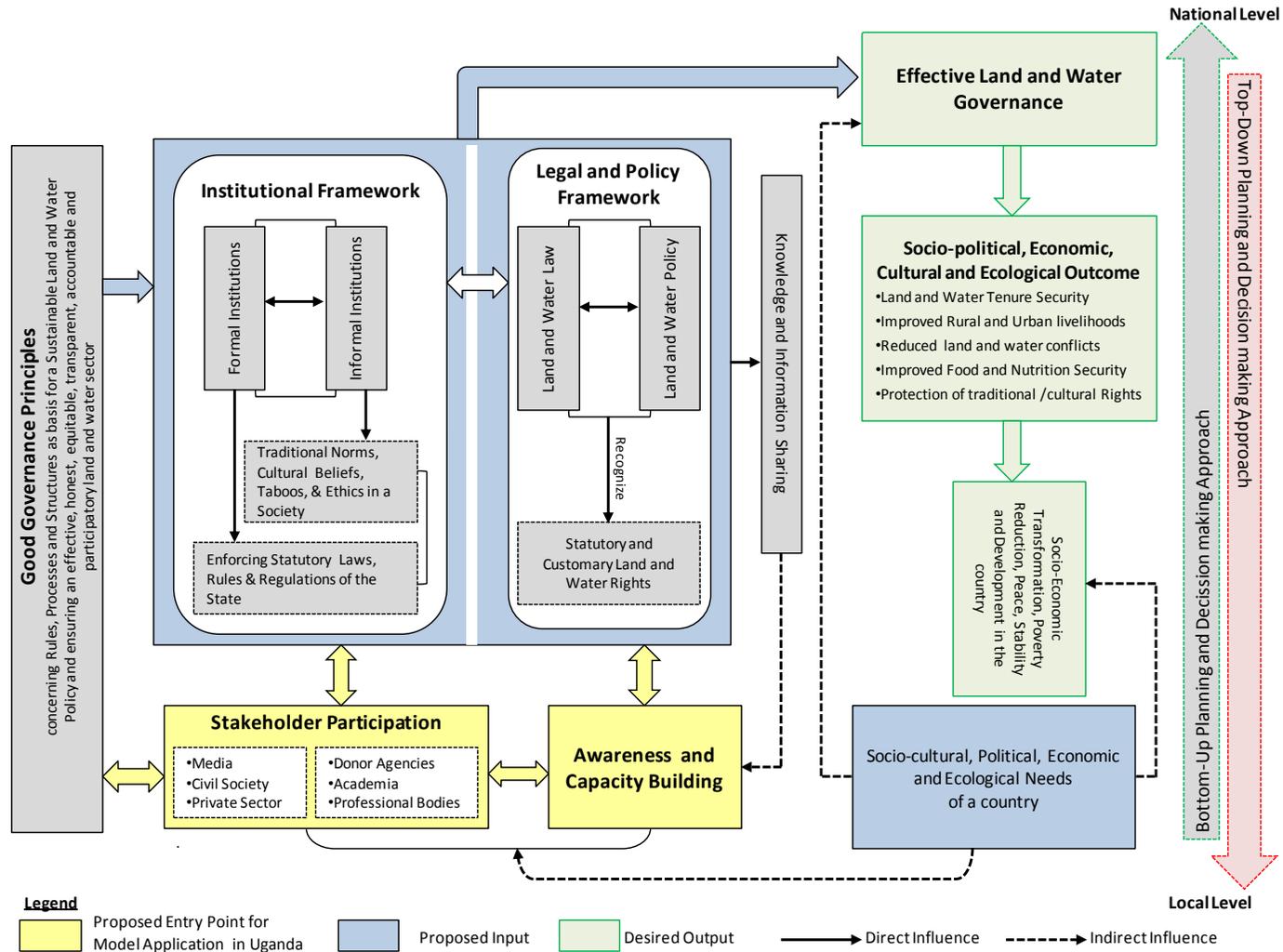
However the entry point for applicability of the proposed land and water governance improvement model may vary amongst all the five EAC Partner States. For instance the legal framework governing land and water resources varies greatly in all the Partner States. Equally some Partner States have better institutional framework development than others. Therefore it is important that each Partner State carries out a situation analysis and needs assessment to identify gaps that need to be filled in order to streamline land and water governance at a country level. According to the proposed model, the entry point for applicability could be through a thorough assessment of gaps in the country's institutional and legal framework, level of stakeholder participation, level of capacity and awareness or other socio-cultural, political, economic and ecological needs of the country.

⁵⁴ CIVICUS is the World Alliance for Citizen Participation

9.3.1.3 *Applicability of the Proposed Model in Uganda*

Based on the field findings presented in the previous chapters, Uganda has myriad of laws and policies designed to promote land and water governance. However, most existing laws and policies are weak and sometimes implementation is lacking. A number of institutions have been put in place to manage natural resources but have overlapping mandates. The overlapping mandates, duplication of tasks amongst different institutions affects the performance of the environmental sector (LVBC, 2012) - specifically land and water sectors are most affected in Uganda. Most institutions in Uganda lack adequate capacity to deal with the complex and emerging land and water governance challenges. Coupled by inefficient service delivery, most land and water institutions in the country are prone to corruption. These challenges are compounded by lack of adequate stakeholder participation and low levels of awareness. Since most land and water governance challenges are local in nature, sustainable solutions need to be addressed from the grassroots involving a wide range of stakeholders who are most likely to be affected by land and water governance challenges. Thus the recommended entry point for applicability of the proposed land and water governance model in Uganda is through improving stakeholder participation and promoting adequate capacity building and awareness at all governance levels through a hybrid decision-making approach which supports both bottom-up and top-down decision-making approaches.

Figure 42: Proposed Entry Point for Improving Land and Water Governance in Uganda



Source: Author

9.3.2 Practical Solutions to Improve Land and Water Governance in Uganda

9.3.2.1 Improve Stakeholder Participation

Participation of well-informed men and women in the society is a key cornerstone for good land and water governance in Uganda. Participation could be either direct or through legitimate intermediate institutions or representatives. It is important to point out that representative democracy does not necessarily mean that the concerns of the most vulnerable in society would be taken into consideration in decision making. Participation needs to be informed and organized. This means freedom of association and expression on the one hand and an organized civil society on the other hand (UNESCAP, 2012).

The **first step** to improving stakeholder participation in land and water governance would be through development of a framework for stakeholder participation that clearly defines the priority issues of local, national and regional importance where the different stakeholders can contribute towards. According to the research findings, most institutions lack a clear framework for adequate stakeholder engagement. As a result, there is no coordination among the various activities of different stakeholders. Development actors including Civil Society Organizations (CSO) are at liberty to undertake any development interventions in Lake Victoria Basin (EAC, 2006a) with less accountability to the public and their institutional stakeholders. However, only having a framework to guide stakeholder participation is not enough to effectively implement programme activities.

The **second step** required is to identify the different types of stakeholders – both state and non-state that need to be involved in land and water governance. The stakeholders may include other government ministries and agencies, donor agencies, the private sector, media and civil society as well as professional bodies and the academia. Depending on the level of engagement, it is important that older people themselves are involved especially regarding land and water tenure issues. The local people can contribute important knowledge and mobilize local support to avert any unforeseen land and water conflicts. Most land (and water) governance challenges are typically complex, uncertain, and multi-scale. They often affect multiple actors and agencies at all levels, therefore identifying the actors that may directly or indirectly be affected by the project is key for effective implementation of the proposed model.

The **third step** would be setting clear goals for participation so that all stakeholders co-own the shared vision of Lake Victoria Basin⁵⁵. The proposed land and water governance model suggests carrying out a needs assessment as well as identifying the socio-economic and environmental impacts of proposed land and water governance projects in LVB. This can be done through participatory social / environmental impact assessment. Stakeholders should be involved in participatory budgeting in order to promote economic efficiency.

⁵⁵ LVB Shared Vision is “A prosperous population living in a healthy and sustainably managed environment providing equitable opportunities and benefit (EAC, 2006a)”.

The **final step** would be implementation of land and water governance projects and monitoring and evaluation of outcomes. Where applicable, adjustments in this model must be made based on the socio-cultural, political context, economic and ecological needs of Uganda or any other EAC Partner State. Implementation of this model primarily depends on the political will of the government. Political will opens way for stakeholder participation and enhances capacity building for all land and water institutions. Without the strong support of government, decentralized land and water governance cannot be achieved.

9.3.2.2 Promote Awareness and Capacity Building

Experience on ground shows that most land and water sector institutions lack the necessary capacity to efficiently perform and deliver the required services to the citizens. As already identified in Figure 40, efficient institutional performance strongly depends on resource based, managerial and administrative capacity. Capacity development for change requires that even local communities – as key stakeholders- should be able to understand and make meaningful contribution to land and water governance reforms. This can only be achieved through increased public awareness and inclusive participatory approaches.

9.3.2.3 Hybrid Bottom–Up and Top-Down Decision Making Approach

Achieving effective land and water governance in Uganda requires a hybrid decision making approach which involves both bottom-up and top-down approaches. Both approaches can complement each other in order to promote sustainable land and water management. However, most authoritarian governments use a top-down approach in decision making. This top-down approach creates a false assumption that the local communities cannot make better decisions to solve their problems, this ultimately leads to local resistances against government policies and programmes. For instance, most laws and policies are usually designed at the national level but are expected to be implemented starting from the grassroots level. Heavy reliance on punitive measures and the top-down approach in enforcing State laws leads to poor compliance with statutory laws and limited local community participation in monitoring and enforcing natural resource conservation regulations. Therefore, sustainable natural resource management directives must be initiated from the grassroots level following a Bottom-Up approach, where the problems and solutions are perceived as local (Hartter and Ryan, 2010).

Natural resources cannot be monitored and regulated strictly through levying central government legislations. Resource sustainability depends on local rules and use-patterns; incentives and legislation created at the institutional level (Becker *et al.*, 1995); and access to information. Although most policy makers believe that a top-down approach is the easiest way to reach consensus, in most cases information does not trickle down to the grassroots. Often rural communities and their local council leaders are not informed of best management practices, nor national legislations and other environmental statutes. Many of these communities, and especially the more remote ones, have poor infrastructure and limited sources to obtain accurate

information which affect their day-to-day livelihood strategies (Saito, 2004 cited in Hartter and Ryan, 2010). It is vital that this information is accurate. Furthermore, a void in information dissemination may cause communities to remain unaware of problems or mechanisms that can be useful to address environmental issues. Such information breakdown can best be solved through a combination of both top-down and bottom-up (hybrid) approach to land and water governance in Uganda.

9.4 Methodological Limitations and Directions for Further Research

It's important to emphasize that this research is a work-in-progress towards the construction of a rigorous framework for improving land and water governance in Lake Victoria basin. Therefore while conducting the study, some limitations were encountered. The limitations of this study are rooted in methodology and scope of the study. Land and water governance involves many actors but the objective of the study focussed mainly on key institutions involved in governance of Lake Victoria Basin across all levels of governance (i.e. regional, national and sub-national levels). The research mainly focused on LVBC and national institutions like MLHUD, MWE as well as State agencies like NWSC and NEMA in Uganda. Although other equally significant actors like financial institutions, professional bodies like surveyors and private water operators organized under the Association of Private Water Operators (APWO) in Uganda play have a role in land and water governance, they were not a major focus for this study.

Most of the data on land and water governance was obtained mainly from the formal institutions whose legitimacy is recognized by the State and have clear institutional structures. The fragmented nature of informal institutions like cultural institutions, religious organizations, and other indigenous minority group associations made it difficult to obtain reliable qualitative and quantities data since most informal institutions depend on undocumented oral history, taboos, beliefs and norms. On the other hand, the formal institutions were not committal to freely offer data on highly political and controversial developments involving high levels of corruption. Perhaps if formal institutions like the ministries could give dependable information on corruption in land and water sector, this would give the study a different orientation.

Whilst Lake Victoria Basin has a total catchment area of about 250,000Km² shared by five EAC countries (Uganda, Kenya, Tanzania, Rwanda and Burundi) and Land (and water) governance issues are top on agenda for regional integration in the East African Community (EAC), this research was limited in scope to select a case study which exhibits more representative social, economic and ecological characteristics of the lake basin. Although the findings represent the situation in Uganda, the research would have benefited from selecting other case studies across all the five EAC Partner States that share the LVB. The findings from all the entire EAC Partner States would give a better understanding of land and water governance in the entire Lake Victoria Basin. However, this was not possible due to geographical, economic and political constraints in EAC. Therefore one of the directions for further research would be to carry out an assessment of land and water governance situation in

all the EAC Partner States that share the LVB. The findings from such a study would prescribe better solutions for the entire East African region.

9.5 Final Remarks

The growing land and water crisis in East Africa and particularly in Lake Victoria Basin is not so much a crisis of resource availability but one of governance. Land and water governance challenges are typically complex, uncertain and multi-scaled. No single actor can independently provide sustainable solutions to the growing land and water governance problems without active involvement and participation of various stakeholders (both State and non-State actors). However governance of transboundary resources like Lake Victoria Basin entails benefit sharing among Partner States. The complexity of the physical, political and human interactions within transboundary basins can make equitable management of their risks, costs and benefits especially challenging. This calls for joint harmonized regulatory framework to guide all stakeholders (politicians included) to adopt and practice integrated approaches towards sustainable development and management of Lake Victoria Basin resources.

References

- Acemoglu, D., & Robinson, J.** (2008): *The Role of Institutions in Growth and Development*: Commission on Growth and Development, Working Paper No.10
- ACCU** (2008): *Improving Governance and Accountability in the Water Sector: Anti-Corruption Week 2008*. Anti-Corruption Coalition Uganda, Kampala
- ACF** (2009): *The Human Right to Water and Sanitation in Emergency Situation: The Legal Framework and a Guide to Advocacy*. Action Contre la Faim, February 2009, published by the Global WASH cluster, USA
- Acreman, M.** (2004): *Water and Ethics: Water and Ecology*. Published by the United Nations Educational Scientific and Cultural Organization, Paris - France
- Adams, L., Boccaletti, G., Kerlin, M., & Stuchtey, M.** (2009): *Charting Our Water Future: Economic Frameworks to inform decision-making*. Report for the 2030 Water Resource Group
- AfDB** (2010): *Water Sector Governance in Africa*: Africa Development Bank, Water Partnership Program (WPP)
- Appiah-Opoku, S., & Mulamoottil, G.** (1997): Indigenous Institutions and Environmental Assessment: The Case of Ghana. *Environmental Management* 21 (2): pp. 159-171
- Bang, H.P.** (Eds.) (2003): *Governance as Social and Political Communication*: Published by Manchester University Press, UK
- Barlowe, R.** (1986): *Land Resource Economics: The Economics of Real Estate* (4th Edition). Englewood Cliffs, NJ: Prentice Hall
- Batungi, N.** (2008): *Land Reform in Uganda: Towards a Harmonized Tenure System*. Fountain Publishers, Kampala - Uganda
- Beadle, L.C.** (1981): *The Inland Waters of Tropical Africa*: London, Longman, 433 pp.
- Becker, C. D., Banana, A. Y., Gombya-Ssembajjwe, W.** (1995): Early detection of tropical forest degradation: an IFRI pilot study in Uganda. *Environmental Conservation* 22 (1), pp. 31–38.
- Bhagwat, S. & Rutte, C.** (2006): Sacred Groves: Potential for Biodiversity Management. *Frontiers in Ecology and the Environment* 10: pp. 519-52
- Bishop, W.W.** (1969): Pleistocene Stratigraphy in Uganda: *Geological Survey of Uganda Memoir*, X: 128 pp
- Bomuhangi, A., Doss, C., & Meinzen-Dick, R.** (2011): *Who Owns the Land? Perspectives from Rural Ugandans and Implications for Land Acquisitions*, IFPRI Discussion Paper 01136 November 2011

- Bratton, M.** (1994): *Civil Society and Political Transition in Africa*. Boston, MA: Institute for Development Research
- Bremner, J., & Zuehlke, E.** (2009): *Integrating Population, Health and Environment in Uganda: Policy Brief*, Population Reference Bureau, Washington, DC
- Bruce, J.** (1998): *Review of Tenure Terminology*. Tenure brief No. 1, University of Wisconsin.
- Bruch, C.** (2000): *Regional Opportunities for Improving Environmental Governance through Access to Information, Public Participation, and Access to Justice*. Presented at the African Ministerial Conference on Environment on 3 April 2000 in Abuja - Nigeria
- Buch, S.** (2007): *Property rights as a poverty reduction strategy, Public or Private Good*: Master thesis submitted to the Graduate school of Communications, Culture and Technology of Georgetown University, Washington DC
- Bukvova, H.** (2009): *"Research as a Process: A Comparison between Different Research Approaches*. Sprouts: Working Papers on Information Systems, 9(29)
- Burstein, D.** (2011): *Marketing Optimization: How to determine the proper sample size*
- Busingye, H.** (2002): *Customary Land Tenure Reform in Uganda: Lessons for South Africa*- International Symposium on Communal Tenure Reform. PLAAS, Johannesburg, 12-13 August 2002
- Calder, I. A.** (2005): *Blue Revolution: Integrating Land and Water Resources Management*. Second Edition Published by Earthscan, USA
- Cargan, L.** (2007): *Doing Social Research*: Rowman and Littlefield Publishers, Inc. USA
- Castro-Sardi, X., & Mlikota, K.** (2002): *Overview on E-governance: ICTs as Tools for Improving Local Governance*. UNESCO working paper Prepared in the Framework of the ICT Cross-Cutting Project, United Nations Educational, Scientific and Cultural Organization, November 2002
- Clay, C. D., Guizlo, M., & Wallace, S.** (1994): *Population and Land Degradation: Working Paper No. 14* Carrera-Hernandez, J.J. and Gaskin, S.J., 2007. Spatio-temporal analysis of daily precipitation and temperature in the Basin of Mexico: *Journal of Hydrology*, 336(3-4): pp.231-249
- Cochran, W.G.** (1977): *Sampling Techniques: (3rd ed.)* John Wiley & Sons, Inc., New York - USA
- Coldham, S.** (2000): 'Land Reform and Customary Rights: The Case of Uganda. ' *Journal of African Law* 44 (01): 65-77
- COWI Consulting Engineers,** (2002): *Integrated Water Quality/ Limnology Study for Lake Victoria: Lake Victoria Environmental Management Project, Part II Technical Report*
- Cowx, I. G., van der Knaap, M., Muhoozi, L.I., & Othina, A.** (2003): *Improving Fishery Catch Statistics for Lake Victoria: Aquatic Ecosystem Health & Management*, 6(3): pp. 299–310, 2003

- Creswell, J. W.** (1998): *Qualitative Inquiry and Research Design: Choosing among Five Traditions*, Sage Publications, Thousand Oaks, CA: Sage
- Creswell, J. W.** (2007): *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (3rd ed.). Thousand Oaks, CA: Sage
- Creswell, J. W.** (2009): *Research Design: Qualitative, quantitative and mixed methods approach* (3rd ed.). Thousand Oaks, CA: Sage
- Dale, P.** (2000): Surveying Engineering and Global Land Management, *Zeitschrift für Vermessungswesen*. 125. Jahrgang, Heft 5/2000, 147-154, Konrad Wittwer Verlag, Stuttgart
- Dale, P., Mahoney, R., & McLaren, R.** (2006): *Land Markets and the Modern Economy*. Research paper for the Royal Institution of Chartered Surveyors (RICS), UK
- Deakin, M., Dixon-Gough, R., & Mansberger, R.** (Eds.) (2004): *Methodologies, Models and Instruments for Rural and Urban Land Management*, International Land Management Series, Ashgate Publishers, UK
- de Loë, R. C., Armitage, D., Plummer, R., Davidson, S., & Moraru, L.** (2009): *From Government to Governance: A State-of-the-Art Review of Environmental Governance* Final Report Prepared for Alberta Environment, Environmental Stewardship and Environmental Relations. Guelph, ON: Rob de Loë Consulting Services
- Denzin, N. K.** (1970): *The Research Act in Sociology*: Chicago: Aldine
- Denzin, N.K.** (1989): *The Research Act*: Third Edition, Englewood Cliffs, NJ: Prentice-Hall
- Denzin, N. K., & Lincoln Y.S.** (Eds.) (2000): *Hand book of Qualitative Research*: Thousand Oaks, Sage Publications
- Dey, P., Sharma, A., & Shayak, B.** (2006): *Land Tenure Security: Is Titling Enough?* National Institute of Urban Affairs, Core 4B, India Habitat Centre, Lodhi Road, New Delhi
- DWD** (2010): *Water Supply Atlas*: Directorate of Water Development, Ministry of Water & Environment, Uganda
- EAC** (2003): *Protocol for Sustainable Development of Lake Victoria Basin*, East African Community, Signed 29th November 2003
- EAC** (2006a): *Popular Version of the Shared Vision and Strategy Framework for Management and Development of Lake Victoria Basin*: East African Community – March 2006
- EAC** (2006b): *The Treaty for Establishment of the East African Community*: Amended on 14th December 2006 and 20th August 2007
- EAC** (2007): *Operational Strategy- Lake Victoria Basin Commission 2007-2010*. East African Community, Lake Victoria Basin Commission, Kisumu – Kenya
- EAC** (2008): *Terms of Reference to Prepare Investment Plans for 15 Secondary Urban Centers under the Lake Victoria Basin Water and Sanitation Initiative*: East African Community, Lake Victoria Basin Commission, August 2008

- EAC** (2011): *Harmonization of Regional Policies, Rules and Regulations Governing Utilization of Water Resources in the Lake Victoria Basin*: East African Community, Lake Victoria Basin Commission Secretariat, July 2011, WEMA Consult (T) Ltd.
- EAC** (2011b): *Addressing the Fear, Concerns and Challenges of the East African Federation*: Report of the Team of Experts, East African Community. October 2011
- Earle, A. & Malzbender, D.** (Eds.) (2006): *Stakeholder participation in Transboundary Water Management- Selected Case Studies*: African Centre for Water Research, Cape Town, South Africa
- Eisner, E. W.** (1991): *The Enlightened Eye*: Qualitative inquiry in the enhancement of educational practice. New York: Macmillan
- Enemark, S.** (2006): *The e-Future Challenge*: Paper Presented at the FIG Workshop on eGovernance, Knowledge Management and eLearning, Budapest, Hungary, 2006
- Enemark, S.** (2009): *Land Governance: Supporting the Global Agenda and Serving Society* Olumide Memorial Lecture, Nigeria Institution of Surveyors, Abuja, Nigeria, 5 November 2009
- FAO** (2002): *Land tenure and Rural Development*: FAO Land Tenure Series 3, Food and Agricultural Organization of the United Nations, Rome – Italy
- FAO** (2006): *Land and Water Rights in the Sahel*: Tenure challenges for improving access to water for agriculture. Lorenzo Cotula (Ed.) LSP Working paper 25, Food and Agricultural Organization of the United Nations
- FAO** (2007): *Good Governance in Land Tenure and Land Administration*: Land Tenure Studies 9, Food and Agricultural Organization of the United Nations
- FAO** (2009a): *Towards Improved Land Governance*, Land Tenure Working Paper 11, Food and Agricultural Organization of the United Nations, Rome – Italy
- FAO** (2009b): *Law for Water Management*: a guide to concepts and effective approaches, Legislative Study 101, Food and Agricultural Organization of the United Nations, Rome –Italy
- FAO & TI** (2011): *Corruption in the Land Sector, Working Paper #04/2011*: Food and Agricultural Organization of the United Nations and Transparency International. Accessed 10 July 2012 from: <http://www.fao.org/docrep/014/am943e/am943e00.pdf>
- FIG** (1999): *The Bathurst Declaration on Land Administration for Sustainable Development*: International Federation of Surveyors, FIG Publication No. 21
- FIG** (2010): *Land Governance in Support of the Millennium Development Goals: A New Agenda for Land Professionals*. FIG / World Bank Conference, Washington DC, USA 9–10 March 2009. FIG Publication No. 45
- Fisher, F. M. & Huber-Lee, A.** (2005): *Liquid Assets: An Economic Approach for Water Management and Conflict Resolution in the Middle East and Beyond* Published by Routledge

- Flick**, U. (2009): *An Introduction to Qualitative Research: 4th Edition*. Thousand Oaks, Sage Publications
- Freeman**, R. E (1984): “*Strategic Management: A stakeholder Approach*”. Boston, MA: Pitman
- Gisselquist**, R. M (2012): *Good Governance as a Concept, and Why This Matters for Development Policy*: Working Paper No. 2012/30, United Nations University- World Institute for Development Economics Research (UNU-WIDER)
- GoU** (2010): *National Development Plan 2010/11 -2014/15*: Government of Uganda
- GoU** (2010b): *The State of Uganda’s Population Report 2010: Population and Sustainable Development – Emerging Challenges, Opportunities and Prospects*
- Greif**, A. (2006): *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. Cambridge: Cambridge University Press
- Guion**, L. A., **Diehl**, D. C., & **McDonald**, D. (2002): *Triangulation: Establishing the Validity of Qualitative Studies*. FCS6014 Document, University of Florida, USA
- GWP** (2000): *Integrated Water Resources Management: TAC Background Paper #4*. Global Water Partnership Technical Advisory Committee, Stockholm - Sweden
- Hall**, P., & **Taylor**, R. (1994): *Political Science and the Four New Institutionalisms*: Harvard University Centre for European Studies, unpublished manuscript
- Hambleton**, R. (2004): *Beyond New Public Management – city leadership, democratic renewal and the politics of place*, paper to the City Futures International Conference, Chicago, Illinois, USA, 8 -10 July 2004
- Hart**, C. (1998): *Doing a Literature Review: Releasing the Social Science Research Imagination*-Sage Publications London - UK
- Harterter**, J. & **Ryan**, J.S. (2010): Top-down or bottom-up? Decentralization, natural resource management, and usufruct rights in the forests and wetlands of western Uganda: *Elsevier Journal of Land Use Policy* 27 (2010) pp.815-826
- Harrison**, B. (2002): Photographic visions and narrative inquiry: *Narrative Inquiry*, 12 (1), 7-111
- Helmke**, G., & **Levitsky**, S. (2004): Informal institutions and comparative politics: a research agenda. *Perspective on politics* 2 (4):725-740
- Hodgson**, S. (2004): *Land and water – the rights interface*: Food and Agriculture Organization of the United Nations (FAO Legislative Study # 84)
- Hundsbaek**, R.P., **Spichiger**, R., **Alobo**, S., & **Kidoido**, M. (2012): *Land Tenure and Economic Activities in Uganda: a Literature Review*, Danish Institute for International Studies, DIIS Working Paper 2012:13 with the collaboration of Bernard Bashaasha and Helle Munk Ravnborg
- Hussey**, J., & **Hussey**, R. (1997): *Business Research*, London: Macmillan

- IFAD** (2004): *Linking land and water governance – IFAD experience*: International Fund for Agricultural Development, World Water Week Stockholm 2004. Accessed 18 May 2012 from: http://www.ifad.org/events/water/synt_report.pdf
- IFAD** (2008): “*Improving Access to Land and Land Tenure Security*” Policy Brief Printed by Palombi e Lanci, Rome December 2008
- Jessop**, B. (1998): The Rise of Governance and the Risks of Failure: The case of economic development. *International Social Science Journal*, 50(155): pp. 303–316
- John**, P. (2001): *Local Governance in Western Europe*: London, Sage Publishers
- Johnson**, T.C., **Scholz**, C.A., **Talbot**, M.R., **Kelts**, K., **Ricketts**, R.D., **Ngobi**, G., **Beuning**, K., **Ssemmanda**, I., & **McGill**, J.W. (1996): Late Pleistocene desiccation of Lake Victoria and rapid evolution of cichlid fishes: *Science Journal*, 273: pp. 1091–1093
- Joireman**, S. F. (2007): ‘Enforcing New Property Rights in Sub-Saharan Africa: The Ugandan Constitution and the 1998 Land Act.’ *Comparative Politics* 39(4): pp. 463-480
- Kamanyire**, M. & EPRC (2000): *Sustainability Indicators for Natural Resource Management and Policy*: Natural Resource Management and Policy in Uganda, Overview Paper. Working Paper 3, Economic Policy Research Centre
- Kayombo**, S., & **Jorgensen**, S.E. (2005): Lake Victoria: Experiences and Lessons learned Brief. *Journal of Environmental Quality*, 35: pp. 584–589
- Kaufmann**, D., **Kraay**, A., & **Zoido-Lobaton**, P. (1999): *Governance Matters*: Policy Research Working Paper 2196. Washington: World Bank
- Kirk**, J., & **Miller**, M.L. (1986): *Reliability and Validity in Qualitative Research*: Qualitative Research Methods Series 1, Sage Publications
- Kirk**, M. (1998): *The evolving role of the state in influencing property rights over grazing resources in Sub-Saharan Africa*. Paper presented at the International Symposium on Property Rights, Risk and Livestock Development, Feldafing, Germany, September 27-30 1998
- Kirk**, M. (1999): *Land tenure, Technological Change and Resource Use*: Transformation Process in African Agrarian Systems, Peter Lang Europäischer Verlag der Wissenschaften
- Kirk**, M., **Löffler**, U., & **Zimmermann**, W. (1998): *Land Tenure in Development Cooperation*: Division 450, Rural Development, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)
- Kirk**, M., & **Ngaido**, T. (2001): *Collective Action, Property Rights and Devolution of Rangeland management: selected Examples from Africa and Asia*, in: Meinzen-Dick, R. et. al. (eds), *Collective Action, Property Rights and Devolution of Natural Resource Management*, (DSE/IFPRI), Feldafing, pp. 147-182

- Kironde-Lusugga**, J. M. (2009): *Improving Land Sector Governance in Africa: The Case of Tanzania*. Paper prepared for the “Workshop on “Land Governance in support of the MDGs: Responding to New Challenges” Washington DC March 9-10 2009
- Kiwanuka**, L., & **Matthew**, C. (1941): *Native Laws of Buganda*: Uganda Print and Publishing Company
- Kramm**, J., & **Wirkus**, L. (2010): Local Water Governance: Negotiating Water Access and Resolving Resource Conflicts in Tanzanian Irrigation Schemes. *MICROCON Research Working Paper 33*
- Kritika**, S., **Sohini**, P., & **Pooja**, R.G. (2010): Decentralization in Uganda: *National Council of Applied Economic Research*
- Kuhnen**, F. (1982): Agrarverfassungen, in: *Blanckenburg, P.v (Hrsg.), S. 69-86*
- Larsson**, G. (1997): *Land Management - Public Policy, Control and Participation*: The Swedish Council for Building Research, Bygghorskningsradet-Stockholm
- Lautze**, J., **de Silva**, S., **Giordano**, M., & **Sanford**, L. (2011): Putting the Cart before the horse: Water governance and IWRM: *Natural Resource Forum*, 35 (2011)1-8
- Lawrence**, J. C. D. (1966): *Report of the Mission on Land Consolidation and Registration in Kenya*: London - UK
- LVBC** (2011): *Vulnerability Assessment to Climate Change in Lake Victoria Basin, Kenya*: ACTS Press, African Centre for Technology Studies, Lake Victoria Basin Commission, 2011
- LVBC** (2012): *A Basin-Wide Strategy for Sustainable Land Management in the Lake Victoria Basin*: Lake Victoria Basin Commission, Kisumu - Kenya
- MAAIF** (2004): *The National Fisheries Policy*. Ministry of Agriculture, Animal Industry and Fisheries
- Mabasi**, T. (2008): Review of the Policy and Legal Framework for Implementing Clean Development Mechanism Projects in Uganda and its Implications for Climate Change Mitigation’ *Law, Environment and Development Journal*, Vol. 4/2
- MacInnes**, M. (2012): *Corruption and large-scale land acquisitions: an analysis of the role high level corruption plays in enabling elite capture of land*. Paper presented at the International Conference on Global Land Grabbing II October 17-19, 2012
- Magel**, H. (2000): *Nachhaltige Entwicklung- zur globalen Verantwortung von Bodenordnung und Landentwicklung*. In: *Weber, G. (Hrsg.) Zukunftsperspektiven von Raumplanung und Ländlicher Neuordnung*
- Magel**, H. (2003): *Land Policy and Land Management in Germany*, International Federation of Surveys (FIG) Public lecture in Melbourne-Australia, 6 February, 2003
- Magel**, H. (2011): *Participatory Land use planning in Germany – a precondition and means for sustainable development: Which Role plays Good Land and Water Governance?*

Presentation at the South-South-Dialogue on "Land Use Planning – A Response to Current Constraints and Challenges of Development" Windhoek, June 21 2011

Magel, H., & Franke, S. (2007): Good Governance – What does it mean for Surveyor's Profession and Contributions?

Magel, H., & Gross, C. (2010): *Land and Water Governance: (k)ein Thema für Deutschland?* WasserWirtschaft 5/2010

Malena, C. (2009): *From Political Won't to Political Will: Building Support for Participatory Governance*, CIVICUS World Alliance for Citizen Participation, Kumarian Press USA

Masum, F. (2009): *Actors and processes behind urban fringe development: Mechanism to guide urban land management*. Study on Dhaka, Bangladesh. Doctoral dissertation submitted to the Faculty of Civil Engineering and Surveying, Technische Universität München, Germany

Masum, F. (2011): *Strengthening Individual and Institutional Capacity and Developing Framework for Good Governance: The Need for an Integrated Approach for Proper Land Administration*. FIG Working Week 2011, Bridging the Gap between Cultures-Marrakech, Morocco, 18-22 May 2011

Matsaert, H. (2002): *Institutional analysis in natural resources research: Socio-economic Methodologies for Natural Resources Research. Best Practice Guidelines*. Chatham, UK: Natural Resources Institute

Matz, N. (2005): *Wege zur Koordinierung völkerrechtlicher Verträge*. Berlin: Springer

Mayntz, R., und Scharpf, F.W. (Hrsg.). (1995): *Politische Steuerung und gesellschaftliche steuerungsprobleme: Anmerkungen zu einem theoretischen Paradigma* in Jahrbuch für Staats- und Verwaltungswissenschaft 1, pp. 89-110

Meinzen-Dick, R. (2009): Property rights for poverty reduction: *DESA Working paper No.91, Economic and Social Affairs*.

Meinzen-Dick, R. (2000): Property Rights and Maintenance of Irrigation Systems. GTZ, *MAINTAIN-Thematic Paper No. 6*, Eschborn - Germany

MFPED (2010): *The Background to the Budget, 2010/11 Fiscal Year: Strategic Priorities to Accelerate Growth, Employment, and Socio-Economic Transformation for Prosperity*. Ministry of Finance, Planning and Economic Development, Kampala - Uganda

MFPED (2012): *The Poverty Status Report, Poverty Reduction and the National Development Process: Reducing Poverty, equalizing opportunities and transforming livelihoods*. Ministry of Finance, Planning and Economic Development, Kampala - Uganda

Miles, M.B., & Hubermann, A.M (1994): *Qualitative Data Analysis: An Expanded Source Book*. Second Edition, Thousand Oaks, Sage Publications.

Milner, H. (n.d): Science and the Community: Role of the Ecological Approach in Sustainable Rangeland Management: *Range and Animal Sciences and Resources Management*, Vol. II

- Miranda, L., Hordijk, M., & Torres Molina, R.K.** (2011): *Water Governance Approaches: An Analytical Framework, Literature Review*
- Miranda, L.** (2004): *Cities for Life Revisited: Capacity Building for Urban Management in Peru. Environment and Urbanization*, Volume 16, pages 249-262. Accessed on 6 March 2013 from: <http://eau.sagepub.com/content/16/2/249.full.pdf+html>
- MLHUD** (2001): *Land Sector Strategic Plan 2001-2011: Utilizing Uganda's Land Resources for Sustainable Development*. Ministry of Lands, Housing and Urban Development –Kampala, Uganda
- MLHUD** (2007): *The National Land Use Policy*: Ministry of Lands, Housing and Urban Development. Kampala - Uganda
- MLHUD** (2010): *Statistical Abstract, Vol.1*: Ministry of Lands, Housing and Urban Development. Kampala - Uganda
- MLHUD** (2010b): *Institutions that provide Land Administration Services in Uganda*: Ministry of Lands, Housing and Urban Development. Kampala - Uganda
- MLHUD** (2011): *The Uganda National Land Policy - Final Draft*. Ministry of Lands, Housing and Urban Development. Kampala - Uganda
- Mugabi, E.** (2004): *Uganda's Decentralization Policy, Legal Framework, Local Government Structure and Service Delivery*: Paper prepared for the First Conference of Regional Assemblies of Africa and Europe organized by the Regional Assembly of Tuscany under the patronage of the Italian Presidency and the United Nations Department of Economic and Social Affairs (UNDESA). September 17 to 18, 2004. Florence - Italy
- Munro-Faure, P.** (1996): *Frameworks for Land Management*, "Land Management in the Process of Transition" F I G Commission 7, Annual Meeting 1996, Budapest - Hungary
- MWE** (2007): *Water Development Trends in Uganda: Policy and Achievements*. Ministry of Water and Environment, Churches for Water in Africa Conference 21-25 May 2007
- MWE** (2011): *Water and Environment Sector Performance Report, 2011*: Ministry of Water and Environment. Kampala - Uganda
- Mwebaze, R., & Sebina-Ziwa, A.,** (Eds.) (n.d): *Challenges to District Land Boards in the first Five Years of their existence: Reviewing the District Land Boards*. Accessed 6 August 2012 from: <http://ulaug.org/new/wp-content/uploads/reviewing-landboards-1.pdf>
- MWLE** (1999): *The National Water Policy: Ministry of Water, Land and Environment*, Republic of Uganda
- Nanda, V.** (2006): 'The "Good Governance" Concept Revisited'. *Annals of the American Academy of Political and Social Science*, 603: 269-83

- NAPE** (2006): Multi-Stakeholder Consultations on Lake Victoria Crisis and Strategy for the Next Steps: *A Publication of National Association of Professional Environmentalists*, with funding from IUCN-Netherlands Committee, October 2006
- Ndegwa, S. N.** (2002): "Decentralization in Africa: A Stocktaking Survey": *Africa Region Working Paper Series*, No. 40
- NEPAD** (2007): '*Governance in Africa's Development: Progress, Prospects and Challenges*'. Thematic paper prepared by the NEPAD Secretariat, in conjunction with the African Peer Review Secretariat and in consultation with the African Union Commission, for the 9th Africa Partnership Forum, Algiers, Algeria, 12-13 November 2007
- Nelson, R. R., & Sampat, N. B.** (2001): Making Sense of Institutions as a Factor Shaping Economic Performance: *ELSEVIER Journal of Economic Behavior and Organization*, Vol. 44(2001) pp.31-54
- NEMA** (2002): *State of Environment Report for Uganda 2002*: National Environment Management Authority (NEMA), Kampala - Uganda
- NEMA** (2008): *State of Environment Report for Uganda 2008*: National Environment Management Authority (NEMA), Kampala - Uganda
- NEMA** (2010): *State of the Environment Report for Uganda 2010*: National Environment Management Authority (NEMA), Kampala - Uganda
- NEMA** (2011): *Annual Performance Report 2010/2011*: National Environment Management Authority (NEMA), Kampala - Uganda
- Newman, I & Benz, C.R.** (1998): *Qualitative- Quantitative Research Methodology*: Exploring the interactive Continuum, Southern Illinois University, USA
- NFA** (2009): *Draft land-cover technical report, Kampala*: National Forest Authority, Kampala - Uganda
- Njonjo, C. M.** (2002): *Report of the Commission of Inquiry into the Land Law System of Kenya*: Government Printer, Nairobi - Kenya
- North, D.** (1990): *Institutions, Institutional Change, and Economic Performance*: New York: Cambridge University Press
- Nutt-Powell, E. T., Landers, S., Nutt-Powell, B. R., & Sorrell, L.** (1978): *Towards a Theory of Institutional Analysis*: Paper prepared for US Department of Energy under contract No. EX-76-A-01-2295
- NWDR** (2006): *National Water Development Report*: Prepared for the 2nd – UN World Water Development Report, Water a Shared Responsibility, 2006
- Nye, F.L., & Berardo, F.M.** (Eds.). (1966): *Emerging Conceptual Frameworks in Family Analysis*: The Macmillan Company, New York - USA

- OAG** (2011): *Value for Money Audit Report on the Functionality of the Land Management Institutions in Uganda*: Office of the Auditor General, Republic of Uganda, March 2011
- Obitre-Gama, J.** (1999): *Water Law, Water Rights and Water Supply in Africa: Uganda Country Study Report*. Funded by the UK Department for International Development, DfID KaR Project R7327
- ODI** (2004): *Right to Water: Legal Forms, Political Channels*, Overseas Development Institute, Briefing Paper, July 2004
- OECD** (2001): *Cities for Citizens: Improving Metropolitan Governance*, Organization for Economic Cooperation and Development
- Okuku, J. A.** (2006): 'The Land Act (1998) and Land Tenure Reform in Uganda.' *Africa Development* 31(1): 1-26
- Okurut, T.O** (2010): *The Governance Mechanism of Lake Victoria Basin-Past, Present and Future Outlook: 2010 World Water Week, Side Event- Management of Transboundary Water Resources-the Case of Lake Victoria Basin*, Stockholm-Sweden
- Orindi, V., & Huggins, C.** (2005): *The dynamic relationship between property rights, water resource management and poverty in the Lake Victoria Basin*: International workshop on 'African Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa', 26-28 January 2005, Johannesburg-South Africa
- Pacheco, P., Barry, D., Cronkleton, P., & Larson, A.M.** (2008): *The role of informal institutions in the use of forest resources in Latin America*: Forests and Governance Programme No. 15/2008 Published by Center for International Forestry Research (CIFOR), Bogor - Indonesia
- Patton, M. Q.** (1987): *How to Use Qualitative Methods In Evaluations*: Thousand Oaks, CA: Sage.
- Patton, M. Q.** (2002): *Qualitative Research and Evaluation Methods* (3rd ed.). Thousand Oaks, CA: Sage
- Payne, G. (Ed.)** (2002): *Land Rights and Innovation*: ITDG Publishing, London - UK
- Pena, H & Solanes, M.** (2003): *Effective Water Governance in the Americas: A Key Issue*. Document prepared for the Third Water Forum in Kyoto, Japan, 16-23 March 2003.
- Peng, W. M.** (2011). *Global Business*, (2nd ed.) South-Western Cengage Learning, USA
- Perry, G., Maloney, W., Arias, O., Fajnzylber, P., Mason, A., & Saavedra. J.** (2007): *Informality: exit and exclusion*: The World Bank, Washington, DC
- Philip, R., Anton, B., Cox, D., Smits, S., Sullivan, C. A., Chonguica, E., Monggae, F., Nyagwambo, L., Pule, R., & Berraondo López, M.** (2008): *Local Government and Integrated Water Resources Management (IWRM) Part II: Understanding the Context – The Role of Local Government in IWRM*

- Powell, W., & DiMaggio, P.** (1991): *The Iron Cage Revisited: Institutional isomorphism and collective rationality in organizational fields*. In: Powell, W., DiMaggio, P. (Eds.), *The New Institutionalism in Organizational Analysis*. University of Chicago Press, Chicago, pp. 63–82
- Rajasekar, S., Philominathan, P., & Chinnathambi, V.** (2006): *Research Methodology*
- Reed, S.M.** (2008) Stakeholder participation for environmental management: A literature review. *Elsevier Biological Conservation Journal*, 141 (2008) pp. 2417 –2431
- Rigner, K.** (1967). *Agrarverfassungen*, in: *Blanckenburg, P.v & H.D. Cremer (Hrsg.)*, *Handbuch der Landwirtschaft und Ernährung in den Entwicklungsländern*, Bd. 1, Stuttgart, S. 59-95
- Rosenau, N. J., & Otto-Czempiel, E.** (1992): *Governance without Government: Order and Change in World Policies*. Cambridge University Press
- Rugadya, M.** (1999): *Land Reform-The Ugandan Experience: Land Use and Villagization Workshop*, Hotel de Mille Collines in Kigali, Rwanda 20-21 September 1999
- Rugadya, M.** (2007): “*Gender in Uganda’s National Land Policy*” Issues, Theories and Policy Responses: Implications for Poverty Social Impact Assessment in Uganda. Occasional Paper, Kampala: Associates for Development
- Rugadya, M.** (2009): *Escalating Land Conflicts in Uganda: A review of evidence from recent studies and surveys*
- Saito, F.** (2004): Community environmental conservation in Uganda: possibilities and Limitations of decentralized management. *Journal of the Socio-Cultural Research Institute*, 1–22
- Santiso, C.** (2001): Good Governance and Aid Effectiveness: *The World Bank and Conditionality. The Georgetown Public Policy Review*, Vol. 7 No.1 Fall 2001
- Scholz, C. A., Rosendahl, B.R., Versfelt, J. W., & Rach, N.** (1990): Results of high-resolution echo-sounding of Lake Victoria
- Scholz, C. A., Johnson, T.C., Cattaneo, P., Malinga, H., & Shana, S.** (1998): *Initial results of 1995 IDEAL seismic reflection survey of Lake Victoria, Uganda and Tanzania*: In: Lehman, J. T., (eds.), *Environmental Change and Response in East African Lakes*. Kluwer, Dordrecht, pp. 47–58
- SDC** (2006): *Human Rights Policy: Towards a Life in Dignity, Realizing Rights for Poor People*, Swiss Agency for Development and Cooperation (SDC), Bern - Switzerland
- SDC** (2008): *A Human Rights- Based Approach to Water and Sanitation: Briefing Paper*, Swiss Agency for Development Cooperation, September 2008
- Sehring, J.** (2005): Do not fix the Pipes, Fix the Institutions that fix the pipes: Water Governance as a Crucial Factor for Sustainable and Equitable Water Management, in Schmitz Michael, P., (ed.) *Water and Sustainable Development*, pp. 101-116
- Sehring, J.** (2009): *The Politics of Water Institutional Reforms in Neopatrimonial States: A comparative Analysis of Kyrgyzstan and Tajikistan*

- Simpson, S.R.** (1976): *Land Law and Registration*. Cambridge University Press
- Smith, J. K.** (1984): The problem of criteria for judging interpretive inquiry: *Educational Evaluation and Policy Analysis*, Vol.6, No. 4 (Winter 1984) pp. 379-391
- Sriraman, B. & English, L.** (2010): *Theories of Mathematics Education: Seeking New Frontiers*, Springer Verlag, Berlin Heidelberg
- Stålgren, P.** (2006): Corruption in the Water Sector: *Causes, Consequences and Potential Reform: Swedish Water House Policy Brief Nr. 4*. SIWI, 2006
- Stoker, G.** (1998): Governance as theory: five propositions. *International Social Science Journal*, 50(155): pp. 17-28
- Svinicki, M. D.** (2010): *A Guidebook on Conceptual Frameworks for Research in Engineering Education: Rigorous Research in Engineering Education NSF DUE-0341127, DUE-0817461*, 2010, University of Texas
- Swatuk, L.A & Wirkus, L.** (2009): *Transboundary Water Governance in Southern Africa: Examining Underexplored Dimensions*. Sustainable Peace and Global Security Governance, Volume 2
- Talbot, M. R., & Lærdal, T.** (1999): The Late Pleistocene - Holocene Palaeolimnology of Lake Victoria, East Africa, based upon elemental and isotopic analyses of sedimentary organic matter: *Contribution No. 58 to the IDEAL project, Journal of Palaeolimnology*, Vol. 23: pp. 141–164, 2000
- Tapela, N. B** (2006): Stakeholder participation in the transboundary management of the Pungwe river basin, in Earle and Malzbender (Eds.) *Stakeholder participation in Transboundary Water Management*, pp.10-34
- Tashakkori, A., & Teddlie, C.** (Eds.) (2003): *Handbook for mixed methods research in the social and behaviour sciences*: Thousand Oaks, CA: Sage
- Thomas, C.J., Kelts, K., & Odada, E.** (2000): The Holocene History of Lake Victoria: *Royal Swedish Academy of Sciences, Ambio Journal of Human Environment*, Vol.29 No.1, February 2000
- Thurmond, V. A.** (2001): The Point of Triangulation: *Journal of Nursing Scholarship*, Vol. 33:3, pp. 253-258, Sigma Theta Tau International
- Transparency International** (2008): *Global Corruption Report-2008: Corruption in the Water Sector*. Transparency International, New York, Cambridge University Press
- Tindimugaya, C.** (2003): *Towards the Millennium Development Goals: Need for Reform of Water Resources Management in Uganda*. 29th WEDC International Conference, Abuja – Nigeria
- Tumushabe, G., Muyomba-Tamale, L., Ssemakula, E., & Lukwago, D.** (2010): *Uganda Local Government Councils Score Card Report 2008/09: A Comparative Analysis of Findings and Recommendations for Action*. ACODE Policy Research Series No. 32, 2010

- UBOS** (2010): *Statistical Abstract for Uganda 2010*: Uganda Bureau of Statistics
- UBOS** (2010b): *Uganda National Household Survey Report 2009/2010*: Uganda Bureau of Statistics
- UBOS** (2012): *Statistical Abstract for Uganda, June 2012*: Uganda Bureau of Statistics.
- Uganda National NGO Forum** (2009): *The NGO Act, Regulations and Policy in Uganda: The History, Contentions and Suggestions*. A Briefing Policy Paper
- UNCED** (1992): *Agenda 21: Programme of Action for Sustainable Development*. Rio de Janeiro, United Nations Conference on Environment and Development
- UNDP** (1998): *Capacity Assessment and Development*. Technical Advisory Paper No.3
- UNDP** (2003): *World Water Development Report: Water for People, Water for Life*. Paris: World Water Assessment Programme. United Nations Development Programme
- UNDP** (2004a): *Anti-corruption*: New York, Practice Note, United Nations Development Programme
- UNDP** (2004b): *Water Governance for Poverty Reduction: Key Issues and the UNDP Response to Millennium Development Goals*. United Nations Development Programme
- UNDP** (2006): *Human Development Report 2006-Beyond Scarcity: Power, Poverty and the Global Water Crisis*. United Nations Development Programme
- UNDP** (2007a): *Pro-Poor Land Governance: Exploring Opportunities for Concerted Action*. 17-19th January 2007 Workshop, Oslo Governance Centre. United Nations Development Programme
- UNDP** (2007b): *Improving Water Governance in Kenya through the Human Rights- Based Approach: A mapping and Baseline Report*, November 2007, United Nations Development Programme
- UNDP** (2007c): *Association of Private Water Operators in Uganda - Affordable and Safe Water for the Urban Poor: Sub-Saharan Africa – Uganda Case Study*, Growing Inclusive Markets, United Nations Development Programme Private Sector Division, Partnerships Bureau – USA. Accessed on 9th August 2012 from:
http://growinginclusivemarkets.org/media/cases/Uganda_APWO_2008.pdf
- UNEP** (2002): *Global Environment Outlook (GEO-3): Past, Present and Future perspectives* United Nations Environment Programme
- UNEP** (2006): *Africa Environment Outlook (AEO-2): Our Environment, Our Wealth*. United Nations Environment Programme
- UNEP** (2006b): *Lake Victoria: Falling Water Levels Concern for Growing Population*. United Nations Environment Programme Accessed March 2013 from:
http://na.unep.net/atlas/africaLakes/downloads/posters/Lake_Victoria.pdf

- UNEP** (2009): *Industry Sectoral Approaches and Climate Action: From Global to Local Level in a Post -2012 Climate Framework. A Review of Research, Debates and Positions*, United Nations Environment Programme
- UNEP** (2010): *Africa Water Atlas: Division of Early Warning and Assessment (DEWA)* United Nations Environment Programme. Nairobi - Kenya
- UNESCO** (2004): *Developing Institutions of Governance and Public Administration in Africa: Committee of Experts on Public Administration, 3rd Session*. United Nations Economic and Social Council, E/C.16/2004/6
- UNESCO** (2006): *Definition of basic concepts and terminologies in governance and public administration*: United Nations Economic and Social Council, E/C.16/2006/4
- UNESCAP** (2012): *What is good governance?* United Nations Economic and Social Commission for Asia and Pacific: Accessed February 2012 from:
<http://www.unescap.org/pdd/prs/ProjectActivities/Ongoing/gg/governance.asp>
- UNESCO** (2003): *Water for People – Water for Life: The United Nations World Water Development Report*. United Nations Educational, Scientific and Cultural Organization
- UNESCO** (2006): *Water a Shared Responsibility: The United Nations World Water Development Report-2*. United Nations Educational, Scientific and Cultural Organization
- UN-Habitat/GLTN**: (2008). *Secure Land Rights for All: United Nations Human Settlements Programme / Global Land Tool Network*, Nairobi - Kenya
- UWASNET** (2011): *NGOS in the Ugandan Water and Sanitation Sector: Performance report for FY2010/11*, Uganda Water and Sanitation NGO Network
- Verschuren, D., Johnson-Thomas, C., Kling-Hedy, J., Edgington-David, N., Leavitt-Peter, R., Brown-Erik, T., Talbot-Michael, R., & Hecky-Robert, E.** (2002): *History and timing of human impact on Lake Victoria, East Africa: Published 22 January 2002 by The Royal Society*
- Weggoro, N. C., & Ntamubaro, W.** (n.d): *EAC Governance Structure with regard to Water shade Management: Paper presented at the symposium on science and policy linkages for transboundary water management*
- World Bank** (1989): *Sub-Saharan Africa: From Crisis to Sustainable Growth: A long-Term Perspective Study*. World Bank 8209, Stock # 11349
- World Bank** (1991): *Managing Development: The Governance Dimension*: Washington, DC: The World Bank, Discussion Paper 25 June 1994
- World Bank** (1992): *Governance and Development*: Washington, DC: The World Bank
- World Bank** (1994): *Governance - The World Bank Experience*: Washington, DC: The World Bank
- World Bank** (2000): *Reforming Public Institutions and Strengthening Governance: A World Bank Strategy*, Washington, DC

- World Bank** (2009): *Project Appraisal Document on Three Proposed Credits to the East African Community for the Lake Victoria Environment Management Project II: World Bank and the Global Environment Facility (GEF)*. Report No: 45313-AFR. Accessed on 04 July 2013 from: http://knowledgebase.terrafrica.org/fileadmin/user_upload/terrafrica/docs/453130PAD0P10310910002110Box334133B.pdf
- World Bank** (2011): *Uganda, Country Brief: Economic Overview / Performance*: Accessed on 15th February 2012 from: <http://go.worldbank.org/8XKQR04V10>
- World Bank** (2012): *Uganda - Water Management and Development Project*. Washington D.C. - The World Bank. Accessed on 17th August 2012 from: <http://documents.worldbank.org/curated/en/2012/06/16347152/uganda-water-management-development-project>
- WTO** (2004): *World Trade Report, Exploring the linkage between the domestic policy environment and international trade*: World Trade Organization 2004
- Yin, R.** (1984): *Case Study Research: Design and Methods*. Beverly Hills, London, New Delhi: Sage Publications
- Zakout, W., Wehrmann, B., & Törhönen Mika-P.** (2006): *Good Governance in Land Administration: Principles and Good Practices*, FAO and World Bank, Washington D.C, 2006
- Zevenbergen, J.** (2002): *Systems of Land Registration: Aspects and Effects*. Proefschrift ter verkrijging van de graad van doctor aan de Technische Universiteit Delft. PhD Thesis published by Nederlandse Commissie voor Geodesie, Netherlands Geodetic Commission (NCG), Delft, The Netherlands
- Zevenbergen, J.** (2011): *A Pro-Poor Land Recordation System: Towards A Design*. A pre-publication, Enschede – Netherlands
- Zevenbergen, J., Hilhorst, T., & Nsamba-Gayiiya, E.**, (2012): *Increasing Tenure Insecurity in Northern Uganda: How to use External Support for Strengthening Bottom Up Approaches*. Paper prepared for the Annual World Bank Conference on Land and Poverty, The World Bank, Washington DC, April 23-26, 2012

Appendices

10.1 Appendix 1: National Laws and Policies Governing Land and Water Resources

	National Laws	Implementing Institution
1.	The Constitution of Uganda	Government of Uganda
2.	The National Forestry and Tree Planting Act, 2003	Ministry of Water and Environment National Forestry Authority
3.	National Environment Act Cap 152	Ministry of Water and Environment National Environment Management Authority
4.	The Water Act Cap 152	Ministry of Water and Environment
5.	The Uganda Wildlife Act Cap 200.	Ministry of Tourism, Trade and Industry
6.	The Cattle Grazing Act Cap 43/42	Ministry of Agriculture, Animal Industry and Fisheries
7.	The Town and County Planning Act Cap 246	Ministry of Lands Housing and Urban Development
8.	The Land Act Chapter 227	Ministry of Lands Housing and Urban Development
9.	The Uganda Investment code Act Cap 92	Ministry of Finance and Economic Planning Uganda Investment Authority
10.	The Mining Act Cap 148.	Ministry of Energy and Mineral Development
11.	The Local Governments Act Cap 243.	Ministry of Local Government
12.	1924 Registration of Titles Act Cap 230	Ministry of Lands Housing and Urban Development
13.	1906 Successions Act Cap 162	Ministry of Lands Housing and Urban Development
14.	1949 Rent Restrictions Act Cap 231	Ministry of Lands Housing and Urban Development

	National Policies	Implementing Institution
15.	National Land Policy, 2013	Ministry of Lands Housing and Urban Development
16.	National Land Use Policy, 2007	Ministry of Lands Housing and Urban Development
17.	The Wildlife Policy, 1995	Ministry of Tourism, Trade and Industry Uganda Wildlife Authority
18.	The National Food and Nutrition Policy	Ministry of Agriculture, Animal Industry and Fisheries
19.	The National Agricultural Research Policy	Ministry of Agriculture, Animal Industry and Fisheries National Agricultural Research Organization
20.	The Uganda Forestry Policy, 2001	Ministry Water, Lands and Environment
21.	The National Environment Management Policy, 1994	Ministry of Water, Lands and Environment National Environment Management Authority
22.	The National Policy for Conservation and Management of Wetlands Resources Policy, 1994	Ministry of Water, Lands and Environment
23.	The Housing Policy, 1964	Ministry of Works, Housing and Communication
24.	The National Fisheries Policy, 2000	Ministry of Agriculture, Animal Industry and Fisheries
25.	Community – Protected Areas Institution Policy, 2000	Ministry of Tourism, Trade and Industry
26.	Poverty Eradication Action Plan	Ministry of Finance
27.	Vision 2025	Government of Uganda

Source: Author based on the National Land Use Policy, 2007

10.2 Appendix 2: Household Survey Questionnaire

WAKISO DISTRICT, UGANDA
 Location: 00° 24' N, 32° 29' E
HOUSEHOLD SURVEY QUESTIONNAIRE
 Improving Land and Water Governance in Uganda

Household Survey Questionnaire⁵⁶ (HSQ)

This Questionnaire is applicable to Adult males, females and youths above 18 years in the sampled communities

Table below to be completed by Interviewer

Sub - County				
Village / Parish Name				
Name of Respondent (optional)				
Name of Interviewer (Mandatory)				
Interview Date (DD/MM/YY)				
Time	Start		End	Total Minutes

Interviewer to read to the Respondent

Request for Participation

Dear Respondent

This questionnaire is designed purposely to acquire data on Land and Water Governance in Uganda with special focus on the role of institutions in secure land and water rights in Lake Victoria Basin. The information you provide shall be used strictly for academic purposes and will be kept **CONFIDENTIAL**. You were randomly chosen among many respondents and the information you provide us will be combined with information from about 380 other people and will not be identified as coming from you. Thank you for your cooperation.

INSTRUCTIONS TO THE INTERVIEWER

1. Use a **black** pen at all times to mark the responses
2. Mark the response with **X** and indicate the corresponding code in the box
3. In questions where the respondent does not know the answer, enter response code **88**
4. In questions where the respondent refuses to answer, enter "No Response" code **77**

SECTION 1: Demographic Data of Respondents

		Mark (X)	Code
1.1 Respondent's Gender	1= Male		
	2= Female		
1.2 Who is the head of this household?	1= Men		
	2 = Women		
	3 = Youth		
1.3 How many people do you have in your household?	1 = < 4 people		
	2= 4 – 8 people		
	3= > 8 people		
	88= Don't Know		
	1 = 18 -25		
	2= 26 - 32		

⁵⁶ Based on LVBC, 2011

1.4 Age group (in years)	3= 33 - 40		
	4= 41 - 47		
	5= > 48		
	88= Don't Know		
	77= No Response		
1.5 Marital Status	1 = Single / Never Married		
	2= Married		
	3= Separated		
	4= Divorced		
	5= Widowed		
	77= No Response		
1.6 Level of Education	1 = Primary Level		
	2= Secondary Level		
	3= Tertiary Level		
	4= University Graduate		
	5= Post Graduate (Masters, PhD)		
	77= No Response		
1.7 What is your major occupation?	1 = Agriculture		
	2= Fishing		
	3= Transport (taxi, boda-boda)		
	4= Civil Servant		
	5= NGO/CBO Employee		
	6= Unemployed		
	7= Others		
1.8 Average Monthly income	1= 100,000 - 200,000 UGX		
	2= 200,000 - 400,000 UGX		
	3= 400,000 – 600,000 UGX		
	4= Above 600,000 UGX		
	88= Don't Know		
	77= No Response		
1.9 What is your major source of income?	1= Salary		
	2= Wages		
	3= Donation /Gifts		
	4= Business / Trade		
	88= Don't Know		
	77= No Response		

SECTION 2: Land and Water Rights in Lake Victoria Basin

		Mark (X)	Code
Sub- Section A: Land Rights			
2.1 Do you have access to enough Land for production?	1 = Yes		
	2= No		
2.2 What is the main use of your land? And approximately how much land is for each land use type?	1 = Crop Farming (Approx.... acres)		
	2= Grazing Livestock (Approx.....acres)		
	3= Tree planting (Approx..... acres)		
	4= Housing (Approx..... acres)		
	5= Left to fallow (Approx..... acres)		
	88= Don't Know		
	77= No Response		
2.3 In total how much land do you have?	1 = < 1 acre		
	2= 2 - 5 acres		
	3= 6 – 9 acres		
	4= 10-13 acres		
	5= > 14 acres		
	88= Don't Know		
	77= No Response		

2.4 How did you acquire this land?	1 = Inheritance		
	2= Purchased		
	3= Leased		
	4= Gift		
	5= Others:		
	88= Don't Know		
	77= No Response		
2.5 Who has ownership over the Land you use?	1 = Husband		
	2= Wife		
	3= Local Community		
	4= Government		
	5= Church / Mosque		
	6= Clan / Family		
	88= Don't Know		
2.6 If Yes , How much do you pay per month for using or owning land?	1 = < 50,000 UGX		
	2 = 50,000 -100,000 UGX		
	3= 100,000 -150,000 UGX		
	4= >150,000 UGX		
	88= Don't Know		
	77= No Response		
	2.7 Have you experienced any form of land conflict?	1= Yes	
2= No			
77=No Response			
2.8 Who do you experienced conflict with?	1 = Government		
	2 = Private Investor		
	3= Family		
	4= Community		
	5 = Others		
	77= No Response		
2.9 What kind of Land Conflicts have you experienced before?	1 = Boundary		
	2= Ownership conflicts linked to inheritance		
	3= Eviction by Government Agency		
	4= Eviction by Buganda Kingdom		
	5= Eviction by Private land lord		
	77= No Response		
2.10 Has the conflict been solved?	1= Yes		
	2= No		
	77= No Response		
2.11 How was the land conflict solved?	1 = Through the Traditional Customary Court		
	2= Through the District Land Office		
	3= Magistrate's Court		
	4= Out of Court negotiations		
	88= Don't Know		
	77= No Response		
2.12 Do you have a Land Title?	1 = Yes		
	2= No		
	88= Don't Know		
	77= No Response		
2.13 If No to the question above, What problems have hindered you from registering your land?	1 = It is too Expensive for me		
	2= I do not know the registration procedure		
	3= Complicated Registration Process		
	4= I don't have Right to Register this land		
	5= Other problems		
	8= National Fisheries Policy – 2004		
	88= Don't Know		

Sub- Section B: Water Rights		Mark (X)	Code
2.14 Do you have access to Water?	1 = Yes		
	2= No		
2.15 How far is the nearest source of water for your household?	1= < 1 Km		
	2= 1-2 Km		
	3= 3-5 Km		
	4= >5 Km		
	88= Don't Know		
2.16 What is the main source of water for your household?	1= Gravity Flow/ Piped Water		
	2= Deep Borehole		
	3= Lake		
	4= Unprotected Shallow Wells		
	5= Rain Water Harvesting Tank		
	6= Protected Spring		
2.17 What problems do you face in Accessing Water?	1= Long distance		
	2= Unprotected Dirty Water		
	3= Technical Breakdown of water source		
	4= Conflicts with neighboring communities		
	88= Don't Know		
2.18 How would you like these problems to be solved?	1= Government should reduce water bills		
	2= Constructing more protected water sources		
	3= Promote community awareness on water resources		
	4= Promote water harvesting & storage technologies		
2.19 Do you have any Restrictions from using water from L. Victoria?	1 = Yes		
	2= No		
	88 = Don't Know		
2.20 If Yes , from what kind of Restrictions do you face?	1= Require permission to water cattle		
	2= Need Irrigation Water Permit		
	3= Ground Water Permits to construct H ₂ O works		
	4= Fishing Restrictions		
	88= Don't Know		
2.21 What are some of the changes that have occurred in the last 10 years in relation to accessing water resources	1= Water is becoming more scarce		
	2= More Water Use Conflicts		
	3= More Water Use Restrictions by Government		
	4= Reducing Fish Stocks		
	88= Don't Know		
2.22 What is the major Use of this Water from L. Victoria?	1= Domestic / Home Use		
	2= Agriculture / Irrigation		
	3= Industrial Use		
	4= Fisheries		
	5= Services (Water Transport, Tourism etc)		
	88= Don't Know		
2.23 Are you aware of any formal and informal rules that govern the use of L. Victoria?	1 = Yes		
	2= No		
2.24 If Yes , which of the following rules are you most familiar with?	1= Customary rules and practices		
	2= Water Use Group Rules and Regulations		
	3= Local government bylaws & regulations		
	4= International Environmental Laws		
	88= Don't Know		

Sub- Section C: Legal and Institutional Framework for Land and Water Resources		Mark (X)	Code
2.25 Do you have any knowledge about existing Land Laws in Uganda	1 = Yes		
	2= No		
	88= Don't Know		
2.26 Which of the following Laws and Policies are you familiar with?	1= Constitution -1995		
	2= Land Act -1998		
	3= Water Act -1997		
	4= National Forestry and Tree Planning Act -2003		
	5= National Land Policy -2011		
	6= National Land Use Policy – 2007		
	7= National Water Policy -1999		
2.27 Where you involved or consulted in the formulation of any of the above laws?	1 = Yes		
	2= No		
2.28 Which of these Institutions have worked with your community to solve Land and Water problems?	1= Government Ministry (MWE, MLHUD)		
	2= District Land and Water Office		
	3= NGOs /CBOs (name:)		
	4= Government Agencies (NEMA, DWD, NWSC)		
	5= Office of the RDC and Police		
	6= Private Sector (name :.....)		
	88= Don't Know		

Sub Section D: Assessment of Government Action in the Fight against Corruption		Mark (X)	Code
2.29 Have you ever paid a bribe to any government officials to get Land and Water Services?	1 = Yes		
	2= No		
	77= No Response		
2.30 Did you report the incidence of bribery to any Authority?	1 = Yes		
	2= No		
2.31 What are the reasons that prompted you NOT to report the incidence?	1=I wanted the service at any cost		
	2= Fear of intimidation		
	3= Nothing would be done		
	4= I would be in trouble (incriminated)		
	5= I don't know where to report		
	6= Expensive to get justice		
2.32 How Effective and Efficient is your current government's actions in the fight against corruption?	1= Very Effective and Efficient		
	2= Somewhat Effective and Efficient		
	3= Very Ineffective and Inefficient		
	88= Don't Know		
	77= No Response		
2.33 How Participatory does the government collect local people's opinions in preparing laws and policies on Land and Water	1= Very Participatory		
	2= Somewhat Participatory		
	3= Not Participative		
	88= Don't Know		
	77= No Response		
2.34 How Transparent do government institutions sale or lease public land at market prices?	1= Very Transparent		
	2= Somewhat Transparent		
	3= Not Transparent		
	88= Don't Know		
	77= No Response		
2.35 The government recognizes traditional/ customary land and water rights	1= Very Effective		
	2= Somewhat Effective		
	3= Very Ineffective		

	88= Don't Know		
	77= No Response		
2.36 Government implements Land management rules and practices on private and communal land	1= Very Effective		
	2= Somewhat Effective		
	3= Very Ineffective		
	88= Don't Know		
	77= No Response		
2.37 The Government Disseminates Public information on existing and planned laws & policies regarding land and water rights	1= Very Effective		
	2= Somewhat Effective		
	3= Very Ineffective		
	88= Don't Know		
	77= No Response		
2.38 How can Government Institutions improve Service Delivery?	1=Reduce Bureaucratic procedures		
	2= Develop Anti-corruption procedures		
	3= Offer Community Trainings		
	4= Create a toll free hotline to report cases		
	5= Don't know		

****This was the last question. Thank You Very Much****

10.3 Appendix 3: Interview Guide for Key Informants

KEY INFORMANT INTERVIEW GUIDE

Improving Land and Water Governance in Uganda
The Role of Institutions in Secure Land and Water Rights in Lake Victoria Basin

Table below to be completed by Interviewer

Name of Institution					
Name of Respondent (optional)					
Position of Respondent in the Institution					
Name of Interviewer (Mandatory)					
Interview Date (DD/MM/YY)					
Time	Start		End		Total Min

Interviewer to read to the Respondent

Request for Participation

Dear Respondent

This questionnaire is designed purposely to acquire data on Land and Water Governance in Uganda with special focus on the role of institutions in secure land and water rights in Lake Victoria Basin. The information you provide shall be used strictly for academic purposes and will be kept **CONFIDENTIAL**. You were randomly chosen among many respondents and the information you provide us will be combined with information from about 380 other people and will not be identified as coming from you.

Thank you for your cooperation.

Qn. Would you kindly allow me Record this conversation?

Yes

No

SECTION 1: Institutional Assessment in Lake Victoria Basin

		Mark (X)	Code
	1 = Regional (Supra National) organization		
	2= Government Ministry		
	3= Government Lead Agency		

1.1 What is the Type of this Institution?	4 = International Agency: Donor	NGO		
	5= National NGO			
	6= Academia (University/ Research Institute)			
	7= Others CSOs (Media, FBO, CBO)			
1.2 How long have you worked for this institution?	1 = < 1 year			
	2= 2-5 years			
	3= > 5 years			
1.3 What activities is your institution involved in within LVB?				
1.4 How does your Institution manage the Control, Use and Ownership of Land and Water resources in L. Victoria Basin?				
1.5 Could you provide Information on relevant Legislations and Policies regarding Land and Water Resources which your institution implements in LVB				
1.6 What are some of the challenges you are finding in implementing these laws & policies on Land and Water?				
1.7 How does your institution promote secure land and water rights in L. Victoria Basin?				
1.8 In your view, what factors threaten secure Land and Water Rights of the majority of the population in L. Victoria Basin?				
1.9 How would you describe the livelihood conditions of the majority of the population living in L. Victoria Basin?				
1.10 How does your Institution address conflicting interests in Land and Water arising between Public, Private investors and Marginalized groups?				
1.11 What measures should be taken to Improve Land and Water Governance in Lake Victoria Basin?				

10.4 Appendix 4: Field Research Introduction Letter by Doktorvater



Technische Universität München

Technische Universität München – Lehrstuhl für Bodenordnung und Landentwicklung
Arcisstrasse 21, 80333 München – Deutschland



Faculty of Civil Engineering and Surveying
Chair of Land Management
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<http://www.landentwicklung-muenchen.de>

To whom it may concern

Munich, 26th September 2011

Collection of Data for Doctoral Research by Mr. Samuel Mabikke

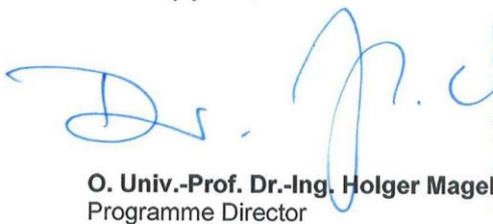
Dear Sir / Madam

I write to state that Mr. Samuel Mabikke is a doctoral researcher under my supervision. He is still undertaking his doctoral research with focus on land and water governance in Lake Victoria Basin, Uganda.

I therefore strongly recommend that you grant him the necessary assistance he requires to enable him successful completion of his research.

If you need any further information, please do not hesitate to contact us.

Sincerely yours,



O. Univ.-Prof. Dr.-Ing. Holger Magel
Programme Director

 O. Univ. Prof. Dr.-Ing. Holger Magel
Technische Universität München
Institute of Geodesy, GIS and Land Management
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10.5 Appendix 5: Data Collection Authorization Letter from LVBC Secretariat

EAST AFRICAN COMMUNITY LAKE VICTORIA BASIN COMMISSION SECRETARIAT

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Kisumu, KENYA



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Fax: +254-57-2026324
E-mail: lvbc@lvbcsec.org
Website: [http:// www.lvbc.com.org](http://www.lvbc.com.org)

Our Ref: LVBC/HR/04-11
Date: 11th February 2011

Mr. Samuel Mabikke
Chair of Land Management
Technische Universität München
Arcis Strasse 21, 80333
München Germany
Email: mabikke@landentwicklung-muenchen.de
mabikkes@gmail.com

Dear Mr. Mabikke,

**RE: APPLICATION FOR INTERNSHIP AT LAKE VICTORIA BASIN COMMISSION
(LVBC) SECRETARIAT**

Following your application for internship at Lake Victoria Basin Commission Secretariat, I am pleased to inform you that you have been accepted under the following conditions:

- a) You will be on attachment in the LVEMPII Project from 2nd July to 30th September 2011;
- b) You are required to work on Monday to Friday from 8:00 am to 5:00 pm with a lunch break of one hour and a half (01:00 – 02:30 PM);
- c) You will be under direct supervision of the Project Coordinator – LVEMP II;
- d) LVBC offers no remuneration of any kind except tea/coffee;
- e) LVBC will not be responsible for your medical and insurance covers;
- f) The Lake Victoria Basin Commission Secretariat may at any time discontinue you from this attachment upon noticing any inconveniences against the norms of the Institution.


Dr. Tom O. OKURUT
EXECUTIVE SECRETARY

Cc: LVEMP II Project Coordinator

6th Floor - Reinsurance Plaza, Oginga Odinga Street

10.6 Appendix 6: Permission to Collect Data from NWSC-Uganda



NATIONAL WATER & SEWERAGE CORPORATION

TELEGRAMS WATERS KAMPALA
Telephone : 256 - 414 - 315000/232919
256 - 312 - 260414/5

Fax : 0414-258299/345531/346447/346532
Email: info@nWSC.co.ug

HEAD OFFICE

P.O.Box 7053
PLOT 39 JINJA ROAD,
KAMPALA

Our Ref: NWSC/R&D/2011

21st September 2011

Mr. Samuel B. Mabikke, MSc.
Chair of Land Management
Centre for Land, Water and Environmental Risk Management,
Technische Universität München
Arcisstrasse 21, D-80333, München
Germany

Dear Sir,

RE: PERMISSION TO COLLECT PHD RESEARCH DATA ON IMPROVING WATER GOVERNANCE IN UGANDA

I am pleased to inform you that the request for permission to collect data for your PhD research in National Water and Sewerage Corporation (NWSC) has been granted.

In regard to the administrative aspects of conducting research and data collection in NWSC, please liaise directly with the Manager – Research and Development, Dr. Martin Kalibbala. Dr. Kalibbala can be contacted by e-mail on martin.kalibbala@nWSC.co.ug or by telephone on +256-712-270019.

Please be informed that in line with NWSC's Research and Development policy, you will be required to provide us with a soft and hard copy of the completed PhD research and to deliver a presentation of your PhD thesis to NWSC management.

We wish you all the best in your academic research endeavors.

Yours sincerely,

Dr. Eng. Silver Mugisha

Chief Manager – Institutional Development and External Services

"NW&SC - Water is Good Water for Public Health"