



Adaptive and Inclusive Watershed Management:

Assessing policy and
institutional support
in Uganda



© 2018 The International Institute for Sustainable Development
Published by the International Institute for Sustainable Development.

International Institute for Sustainable Development

The International Institute for Sustainable Development (IISD) is an independent think tank championing sustainable solutions to 21st-century problems. Our mission is to promote human development and environmental sustainability. We do this through research, analysis and knowledge products that support sound policy-making. Our big-picture view allows us to address the root causes of some of the greatest challenges facing our planet today: ecological destruction, social exclusion, unfair laws and economic rules, a changing climate. IISD's staff of over 120 people, plus over 50 associates and 100 consultants, come from across the globe and from many disciplines. Our work affects lives in nearly 100 countries. Part scientist, part strategist—IISD delivers the knowledge to act.

IISD is registered as a charitable organization in Canada and has 501(c)(3) status in the United States. IISD receives core operating support from the Province of Manitoba and project funding from numerous governments inside and outside Canada, United Nations agencies, foundations, the private sector and individuals.

Adaptive and Inclusive Watershed Management: Assessing policy and institutional support in Uganda

July 2018

Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700

Website: www.iisd.org

Twitter: @IISD_news



Executive Summary

Climate change is impacting Uganda's water systems in a range of ways, including the degradation of wetlands, changing rainfall patterns, increased incidents of extreme weather (floods, landslides, droughts), which leads to deteriorating water quality and quantity. This in turn has created a need to urgently implement climate adaptation measures to maintain human health and to address the challenges in reconciling the country's rapid population growth with its economic development goals.

In addition, in Uganda, women—the main users of water for household and small-scale agriculture—are largely excluded from decision making around water at all levels. They also lack key resources to adapt to climate change such as access to land, credit systems and climate change information. The situation is compounded by women's lack of education and relevant skills. Women and girls are affected the most when water catchments are degraded through chronic and extreme incidents related to climate change, spending hours walking in search of and queuing for water with all the accompanying health and safety implications. Moreover, an inability to provide water and perform household-related tasks puts them at risk of domestic violence.

Incorporating climate change and gender considerations into planning, budgeting and monitoring in the water sector can help systematically reduce some of these challenges. This process is already underway in Uganda through policies, programs and institutional structures. It encompasses applying a variety of measures to empower women, expand the idea of climate resilience and ensure that water and other sector-based planning efforts are both inclusive and adaptive.

This research included a desk review of policies and institutions in places related to water, gender and climate change. We also conducted interviews with key informants from Uganda's water sector institutions and institutions working on issues of gender and climate change. These included officials involved in gender mainstreaming from the Ministry of Water and Environment and experts involved at local, national and international level planning on these issues. This research is intended to understand existing institutional linkages between gender, water and climate change and how they enable inclusive and adaptive watershed management in the country.

The most significant mechanisms in mainstreaming gender concerns into the water sector have been budgeting and women's representation on water management committees and agencies. The Uganda Ministry of Finance, Planning & Economic Development made it compulsory to mainstream gender and equity issues into budgets for ministries, departments and agencies. This is well enforced, and budget approvals are dependent upon inclusion of gender issues. Moreover, the Minister responsible for Finance, in consultation with the Equal Opportunities Commission, issues a Certificate of Gender and Equity for each ministerial policy statement to ensure that proposals are non-discriminatory and equalize opportunities for women and other marginalized groups. In addition, the National Water Policy (1999) mandates a 50 per cent women's representation in all water user committees (WUCs) and requires all WUCs to have at least one woman holding a key position.



The situation is different around mainstreaming of gender into climate change in Uganda: it is virtually non-existent in a number of crucial areas such as funding for women in climate change adaptation, women's representation in climate change institutions, gender equity in accessing climate change information and education, and data collection, monitoring and verification. Nevertheless, some progress has been made in training and awareness, such as through the development of a five-day course on Gender & Climate Change in Uganda by the Climate Change Department designed to build local capacity in Uganda to design and implement gender-responsive climate change policies, strategies and programs.

The connection between water and climate change is better understood and institutionalized in the water sector, resulting in stronger linkages. This includes explicitly assessing and addressing climate impacts in water planning, as well as budgeting for climate adaptation needs in the water sector.

In spite of the general recognition of—and significant progress in—addressing gender and climate change issues in policy development, there is still often a lack of practical understanding as to what mainstreaming of gender and climate change issues into sectoral activities at both national and local levels entails. Thus, the implementation of policy and coordination between ministries become key challenges. Activities such as the collection and use of gender-disaggregated data, funding of gender activities, training members of staff in gender matters (as well as monitoring) are given different levels of attention.

It is also important to note that some top-down regulations are not going to directly change gender stereotypes and customs at all levels. However, policies have some potential to influence socially constructed gender stereotypes, resulting in better women's representation in decision-making processes, easier access to funds and supports, which will ultimately result in women's empowerment.

While Uganda is showing leadership in its policy and institutional systems in relation to climate and gender mainstreaming in water management, efforts in these areas need to be strengthened in terms of implementation and enforcement. We believe that the long-standing challenges of water access, food availability and natural disasters require these integrated approaches, without which the impacts of climate change will result in aggravated poverty, disease and inequality.



Table of Contents

1.0 Uganda: An introduction to the research issues.....	1
Gender.....	2
Climate Change	3
Water	3
Catchment Management Planning.....	4
2.0 Institutional Framework	6
3.0 Assessing Linkages in Institutions and Policies	12
3.1. Water and Gender.....	12
Gender Mainstreaming.....	12
What is gender mainstreaming?.....	12
Gender Budgeting	15
Decision Making Around Water Issues: Representation of women	17
Training for Government Staff in Gender Mainstreaming.....	20
Training for Women and Girls.....	21
Monitoring and Reporting	23
Discussion and Challenges.....	24
3.2 Water and Climate Change.....	25
Climate Change Impacts	25
Climate Change Budgeting in Water Sector	26
Information Collection on Climate Change.....	27
Discussion and Challenges.....	28
3.3 Gender and Climate Change	28
Mainstreaming Gender Into Climate Change.....	28
Access to Information on Climate Change Adaptation Practices by Women and Men.....	30
Budgeting.....	31
Discussion and Challenges.....	31
4.0 Conclusions.....	32
References.....	35



List of Abbreviations

CCD	Climate Change Department
DWD	Directorate of Water Development
DWRM	Directorate of Water Resources Management
G&E	Gender and Equity
GFP	Gender Focal Point
GoU	Government of Uganda
IWRM	Integrated Water Resource Management
M&E	Monitoring and Evaluation
MDA	Ministries, Departments, Agencies
MGLSD	Ministry of Gender Labour and Social Development
MoFPED	Ministry of Finance Planning & Economic Development
MWE	Ministry of Water and Environment
UGP	Uganda Gender Policy
UNFCCC	United Nations Framework Convention on Climate Change
UWASNET	Uganda Water and Sanitation NGO Network
WSGS	Water and Sanitation Gender Strategy
WSS	Water and Sanitation Sector
WUC	Water User Committee

Figure 1. Political Map of Uganda.



II SD.org



Uganda's population is estimated to be about 39 million people in 2018 according to the Uganda Bureau of Statistics, and the country is experiencing rapid annual population growth of around 3.4 per cent—one of the highest rates in the world (Nakabugo, 2018). About 80 per cent of the population is rural (Nsubuga, Namutebi, & Nsubuga-Ssenfuma, 2014). Uganda's economy is strongly linked to the agriculture sector, which supports 4 million farming households, accounts for 48 per cent of exports, employs 60 per cent of the population and generates over 50 per cent of income (NHS, 2010; World Bank, 2011). There has been a decline in the percentage of people living in absolute poverty from 56 per cent in 1992–1993 to 24.5 per cent in 2009–2010 (Nicol & Odinga, 2016). Despite this decline, 85 per cent of the population lives on less than USD 1/day (Payne, Nakato, & Nabalango, 2008). Literacy levels are low in rural areas (particularly among women), as many women have not been provided access to education, either for cultural or economic reasons (Payne et al., 2008).

Gender

Gender-based disparities are deeply entrenched into Uganda's culture and social systems (UNDP, 2015). Despite the fact that land is a critical resource for over 90 per cent of households in Uganda, women own only 16 per cent of the registered land (MWE, 2010). This unequal ownership is remarkable, as 83 per cent of women are extensively engaged in agricultural production providing 70–80 per cent of the agricultural household labour (Environmental Alert, 2010). Nevertheless only 25.5 per cent of the women engaged in agricultural production control the land they cultivate (Government of Uganda, 2007b).

Women are responsible for meeting family needs and carrying out all domestic-related tasks: cleaning, cooking, caring for children, the elderly and tending to small-scale farming (Fentiman & Warrington, 2011; Pommells, Schuster-Wallace, Watt, & Mulawa, 2018). All these responsibilities require consistent daily access to water; consequently, women are much more preoccupied with water availability than men. Men's role in domestic water management is related to purchase of water containers, fetching water for construction and commercial purposes, and for livestock (Payne et al., 2008).

Uganda's Ministry of Water and Environment (MWE) (2016) notes that women and girls are affected the most when water catchments are degraded. Women and school-going girls stand in long queues to get water from the pits dug in the wetlands. Pommells et al. (2018) emphasize the importance of local water points developed in “a consistent and reliable way” supplying affordable water; moreover, water points “must be well regulated, and have clear, community-managed pathways that provide women and girls with safe passage.” When women in rural households have access to an improved water source and spend less time collecting water they use the free time productively, mostly for gardening (MWE, 2017a)

Lack of education and insufficient skills create multiple challenges for Ugandan women due to limited incomes. A great number of rural women are left to earn money through the informal sector (Payne et al., 2008). Despite the higher burden of domestic water management on women, men dominate the arena of planning and decision making regarding water and sanitation investments, and women's views are under-represented (MWE, 2017a).



Climate Change

Climate change is a significant driver of environmental management in Uganda. Damage related to weather events is estimated to be between 2 to 4 per cent of GDP between 2010 and 2050 in the agriculture, water, infrastructure and energy sectors collectively. National-level studies show that if no adaptive action is taken, annual costs could be in the range of USD 3.2 to 5.9 billion within a decade, *with the biggest impacts being on water*, followed by energy, agriculture, and infrastructure (Irish Aid, 2017).

Climate change impacts in Uganda include clear changes in rainfall patterns, water availability, length of seasons, incidents of extreme weather patterns, floods, desertification, distribution and the prevalence of pests and diseases. Frequent droughts dry up boreholes and lower the water table, affecting the rural poor and the cattle corridor the most. Droughts also mean falling crop yields and threats to food security (Lukwiya, 2009).

Climate change is emerging as a major threat to health and is thought to directly contribute to changes in the geographic distribution of vector-borne diseases such as malaria and epidemics of meningococcal meningitis, Rift Valley fever and cholera. Cholera cases have increased throughout the country and have reached epidemic proportions in previously unaffected areas. Other waterborne diseases and epidemics of acute diarrhoea are rampant in flooded areas (Lukwiya, 2009).

Other impacts of climate change are related to hydropower generation. For instance, fluctuations in the Mpanga river have resulted in uncertainties in the power generation from the Mpanga hydropower station. Ugandan law forbids cultivation within 30 metres of the rivers and 200 metres from the lakes, but this is often disregarded, and cultivators have dug up the banks of the rivers. The resulting declines in quality have also impacted the generating station, which requires clean water to operate.

Most common adaptation strategies include agroforestry, mixed farming, soil conservation, food storage, migration to the lake in search of water and pasture, harvesting rain water, planting trees, use of mosquito nets, use of crop residues and plastic materials as sources of energy and engaging in various alternative sources of income (Climate Change Unit et al., 2013).

Water

Uganda is a rainy country with two distinct dry periods. Roughly 61 per cent of the country's water supply is from groundwater, accessed from springs and boreholes around Lake Victoria and south-western Uganda (Nsubuga et al., 2014). Wetlands cover around 11 per cent of the country. They store half of the total water available in the country annually; their continued degradation is therefore a serious issue that threatens the sustainability of Uganda's water resource base (World Bank, 2011).

National safe water coverage from rural areas is estimated at 65 per cent, while access to improved water supplies in urban areas—including both large and small towns is 73 per cent. However, about 80 per cent of the country's population is rural, and rural domestic demand for water is far greater than in urban areas: as noted by Naiga, Penkerb, & Hoglc, “[p]oint water sources in rural Uganda are collectively owned, used, and managed.”



Uganda has only small, localized aquifers and mostly rain-fed agriculture (Uganda Water & Sanitation NGO Network, 2014). Renewable groundwater resources are largely used for meeting domestic demand, but with a low recharge rate of 20–40 mm/yr there is very limited groundwater-based irrigation. The major uses of water for production include irrigation of crops, fish rearing, livestock farming, industrial processing and wildlife conservation (Kiggundu, 2017). Emerging economic activities such as floriculture, horticulture, fish farming and oil exploration may be increasing the number of users of the country’s water resources (Kiggundu, 2017). Projections for 2035 indicate that use of water for agriculture is expected to double (World Bank, 2011).

Water quality is also an issue. Deforestation and agriculture are contributing to increased soil erosion and heightened levels of silt in rivers and lakes. There are laws in place to prohibit cultivation and prevent deforestation, but growing economic and development pressures have increased activities such as quarrying and agriculture—particularly horticulture, with high levels of sprayed pesticides along with charcoal burning for fuel. All of these contribute to significant declines in water quality. Declining water quality is impacting human health, as well as water uses such as for hydropower production.

Integrated water resources management (IWRM) is the chosen means for planning, management and development of water resources in context of development. The goals of practical application of IWRM at the community level include:

- Improved health and socioeconomic well-being
- Increased feelings of social cohesion, pride, dignity, self-esteem and trust
- Improved empowerment and capability to make decisions and control everyday living
- Heightened water management skills and more efficient use of natural resources
- Greater understanding of the link between food production and water
- Better communication with local government
- Heightened ability of local communities to respond to harsh and unpredictable weather conditions and climate change

Gender/women’s empowerment is mentioned in the *Practitioner’s Handbook for IWRM in Uganda* developed by the Ministry of Water and Environment (MWE) (2014) and mainstreamed through both gender focal points and gender strategies in the context of water and sanitation.

Catchment Management Planning

A framework for catchment-based water resources management was developed in 2010 to guide establishment of catchment management structures and preparation of catchment management plans. This framework is being promoted by the MWE’s Directorate of Water Resources Management through four water management zones in Uganda, and it appears to be the best way to deliver benefits from water-related resources for the people of Uganda.

Catchment management planning efforts are aimed at increasing awareness, instituting strategic planning of land and water resources, strengthening partnerships and buy-in, improving transparency and accountability in resources utilization and achieving conflict management in the context of resources utilization.



Catchment management planning is now underway in most of the catchments, and funding is being allocated every year under MWE financial year budgeting. Additional funding is being provided by various other organizations, including the private sector, (e.g., Coca-Cola), development assistance (e.g., World Bank, Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ]), large and small NGOs (e.g., International Union for Conservation of Nature [IUCN], World Wildlife Fund [WWF]) as well as other government and non-government entities in Uganda (e.g., Makerere University, National Forest Authority). A couple of community management programs (CMPs) are still awaiting funding (e.g., Ruhezamyenda and Victoria Nile).

This introductory section described the situation around gender, water and climate change in Uganda along with recent statistics. Water resources availability and accessibility are severely threatened under climate change. Moreover, women—the main users of water—are not part of the decision-making process in the water and sanitation sector, further undermining Uganda’s sustainable water management. In this situation, it is crucial to address the future challenges of water demand, supply and quality through the inclusive and adaptive watershed management approach recognized by the global community. The principles of inclusive management of water resources, even though they may not have been implemented by all governments, are articulated in many international agreements. For example, the Rio Declaration on Environment and Development (UN-DESA, 1992) states: “environmental issues are best handled with the participation of all concerned citizens, at the relevant level ...” (Principle 10). Similar ideas were put forward at the Dublin Water Conference in 1992 (WMO, 1992): “Water development and management should be based upon a participatory approach...” (Principle 2). The Dublin Statement on Water and Sustainable Development further recognizes that “Women play a central part in the provision, management and safeguarding of water” (Principle 3).

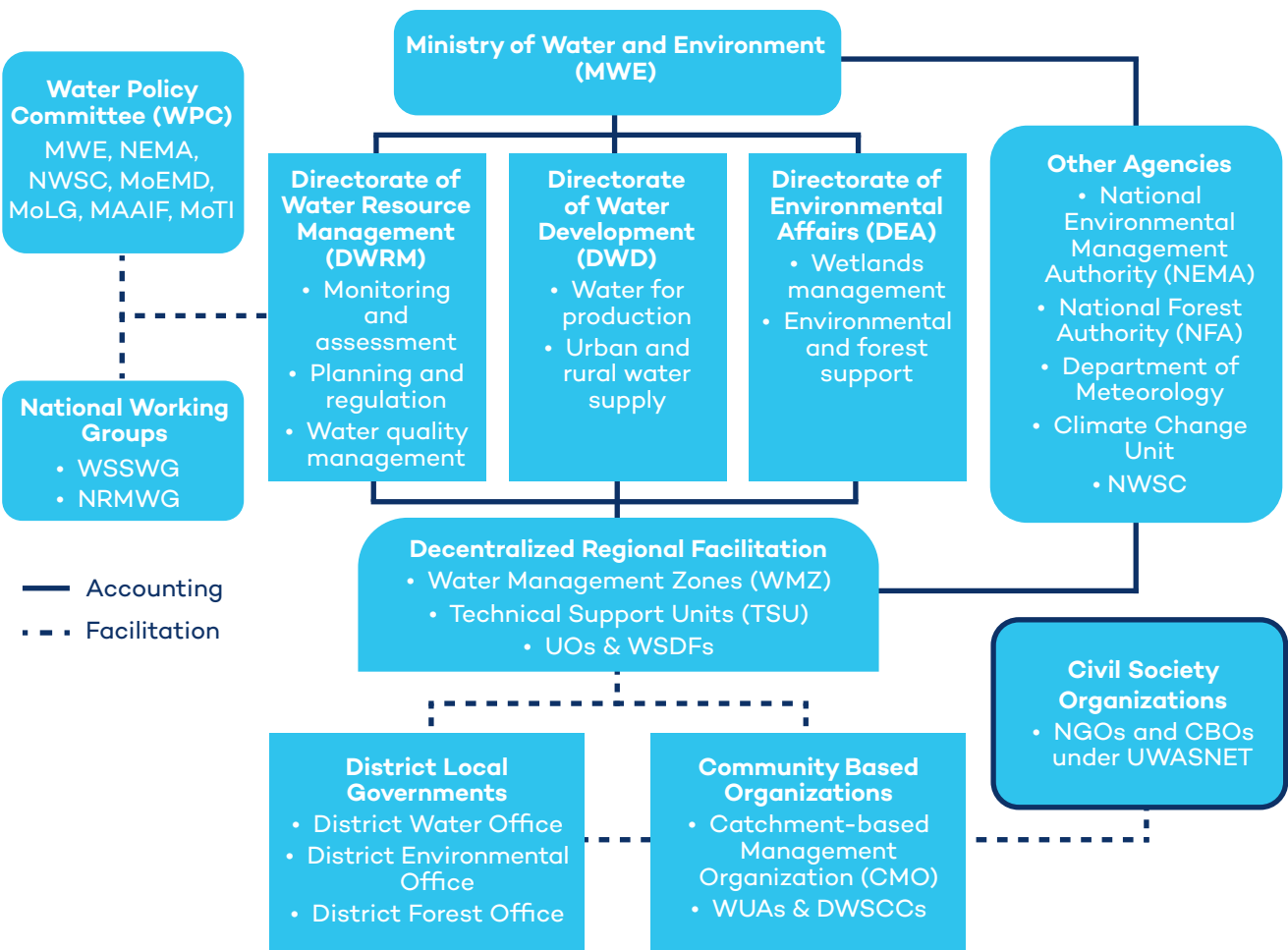
Existing institutional linkages in Uganda between gender, water, and climate change will be analyzed to understand how they can enable inclusive and adaptive watershed management in the country and highlight both achievements and gaps.



2.0 Institutional Framework

The following section provides an overview of the key institutions and governance bodies at various levels and describes key policy documents—i.e., strategies, plans and laws related to water, gender and climate change. This research summarizes them and draws out explicit linkages between these three interlinked disciplines.

Figure 2. Institutional Framework for Water and Environmental Sector in Uganda



Source: Uganda Water & Sanitation NGO Network (UWASNET), 2014.

**Table 1.** Uganda Water Sector: Key Institutions

Name	Description
National Level	
Ministry of Water and Environment (MWE) – National level	The MWE has the overall responsibility for the development, management and regulation of water resources in the country. Some specific responsibilities are: developing policies for water and environment resources management, issuing national standards, providing sustainable safe water supply and sanitation facilities in rural and urban areas, and promoting IWRM. MWE has three directorates: Directorate of Water Development, Directorate of Water Resources Management and Directorate of Environmental Affairs. “The cornerstone of the MWE’s strategy is to devolve planning and water management to the catchment level within an institutional and geographical framework of water management zones (WMZs)” (World Bank, 2011).
Directorate of Water Development (DWD)	The DWD is the lead technical agency responsible for managing water resources, coordinating and regulating all water and sanitation activities. DWD provides support services to the local governments and other service providers through its technical department. DWD consists of the departments of Water for Production, Urban and Rural Water Supply.
Directorate of Water Resources Management (DWRM)	The DWRM is responsible for administering the Water Act. The DWRM fulfills its mandate through the following activities: a) Water use allocation (abstraction and waste water discharge) b) Water service regulation (drilling, construction, dam safety, easement) c) Compliance monitoring and enforcement of water laws d) Review of Environmental Impacts Assessments (EIAs) related to water and awareness raising and information dissemination (Kiggundu, 2017) Currently, the DWRM consists of four departments: Water Resources Monitoring and Assessment Department; Water Resources Planning and Regulation Department; Water Quality Management Department; and the International Transboundary and Water Affairs Department.
Directorate of Environmental Affairs (DEA)	The DEA is responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources. It also manages the restoration of degraded ecosystems, mitigation and adaptation to climate change. The DEA incorporates Wetlands Management and Forest Sector Support Departments, as well as the Environmental Support Services Unit.
Water Policy Committee (WPC)	The WPC is an advisory multisectoral body for national water resource policy and legislation with members from various ministries and organizations. It is a principal advisory organ to the minister responsible for water affairs and is mandated to initiate revisions to legislations and regulations (UN-Water, 2005). The WPC also undertakes conflict resolution between national authorities on water resource matters (Rogers, 2012).
Other Water Agencies	
National Water and Sewerage Corporation (NWSC)	The NWSC is a public utility company fully owned by the government. It is responsible for the delivery of water supply and sewerage services and currently operates in 236 towns (NWSC website), including the capital, Kampala. The NWSC manages cities, municipalities and towns with populations over 5,000, whereas private sector service providers operate in small towns (Kiggundu, 2017).
National Environmental Management Authority (NEMA)	NEMA is a semi-autonomous institution established in 1995. It regulates all environmental management in Uganda, including wastewater discharge. NEMA leads the development of environmental policies, laws, regulations, standards and guidelines, and guides government on sound environment management in Uganda (NEMA, n.d.).
Climate Change Department (CCD)	The CCD, formerly Climate Change Unit (CCU) was created in 2008. Originally under the Uganda Meteorological Department of the MWE, it was elevated to a full department in 2014 (Nachmany et al., 2015). The MWE, through CCD, is the focal institution for the United Nations Framework Convention on Climate Change (UNFCCC) and is responsible for coordinating climate change issues in the country. This department is mandated to spearhead, coordinate, fund and monitor the implementation of the Ugandan National Adaptation Program of Action (NAPA) on climate change.



Name	Description
Decentralized Regional Facilitation	
Water Management Zones	Uganda is divided into four water management zones (WMZs) that enable decentralized water management. WMZs are responsible for facilitating the creation of detailed catchment-based water resource management plans for their respective regions (Uganda Water & Sanitation NGO Network, 2014). As one of their main functions WMZ reviews project proposals for water development and water use, water use permit applications, and environmental impact assessments (EIAs) in the zone and catchment (Uganda Water & Sanitation NGO Network, 2014).
District Level*	
District Water Office	District Water Officers represents DWD at the district level and are responsible for collecting, managing and keeping up-to-date information on water sources at the district level (Uganda Water Supply Atlas, n.d.). A District Natural Resource Officer represents the DEA (Brebbia, 2015).
District Environmental Office	A District Environmental Officer represents NEMA (Brebbia, 2015).
District Forest Office	A District Forestry Officer represents NFA/Forestry Sector Support Department (Brebbia, 2015).
Community Level	
Water User Groups and Associations	Water User Groups and Associations are mandated to manage, operate and maintain water point resources at community level. Through them, the local government plays a key role in setting local priorities and mediating in water management issues. Water user committees (WUCs)—which are sometimes referred to as water and sanitation committees (WSCs)—are designated for each “improved” water source to supervise and maintain water supply. They are supposed to be made up of democratically elected members from within the local community or village, 50 per cent of whom are expected to be women. The main positions in these committees include: Chairperson, Vice-chairperson, Secretary, Treasurer, Caretaker, Publicity/information secretary, and Advisor. WUCs and associations are active at both national and district levels.
Civil Society Organizations	
Uganda Water and Sanitation NGO Network (UWASNET)	UWASNET is an umbrella organization for all NGOs (over 120) involved in the water and sanitation sector established in 2000, with a secretariat at the national level. Its aim is to strengthen the contribution of NGOs in achieving water and sanitation sector goals (Rogers, 2012).

* Uganda has a decentralized system of governance. Local governments (districts, towns and communities) are responsible for implementing, operating, and maintaining water supply and sanitation facilities (except in the large urban centres under NWSC). Local governments receive funding from the central government in the form of conditional grants. The functions of the MWE are established at the district level through delegated officials (Brebbia, 2015). “District” is the highest level of the local government administrative structures.

**Table 2.** Ministries and organizations relevant to water, climate change and gender.¹

Ministry of Gender, Labour and Social Development (MGLSD)	The MGLSD is responsible for the promotion of gender-responsive development, community mobilization, and providing technical support on gender mainstreaming to sectors, institutions, local governments, civil society organizations and the private sector.
Equal Opportunities Commission (EOC)	Established under the Equal Opportunities Commission Act (Government of Uganda, 2007a), EOC operationalizes the Constitutional provision on equal opportunities and has the following functions: “to monitor, evaluate and ensure that policies, laws, plans, programs, activities, practices, traditions, cultures, usages and customs of a. organs of state at all levels; b. statutory bodies and agencies; c. public bodies and authorities; d. private businesses and enterprises; e. non-governmental organizations, and f. social and cultural communities are compliant with equal opportunities and affirmative action in favour of groups marginalized on the basis of sex, race, colour, ethnic origin, tribe, creed, religion, social or economic standing, political opinion, disability, gender, age or any other reason created by history, tradition or custom.” [Article 14(1)].
Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)	The MAAIF liaises with MWE in the implementation of water for production programs, in particular the use and management of water for irrigation, animal production and fisheries.
Ministry of Finance, Planning and Economic Development (MoFPED)	The MoFPED leads budgeting and planning, including allocation of funds for the operations of other ministries and coordinates donor support.
Ministry of Local Government (MLG)	The MLG develops and facilitates the management of effective decentralized government systems capable of managing their own water facilities and delivering the required services to the local people.
Climate Change Policy Committee (within MWE) (also known as the Policy Committee on Environment)	Committee coordinates Climate Change Policy implementation and provides the minister with advice on climate change (Nachmany et al., 2015). The Committee brings together ministers across multiple sectors (local government; gender, labour and social development; finance and planning for economic development; agriculture, animal industry and fisheries; water and environment, etc.) (NDC Partnership, 2017).
Climate Action Network Uganda (CAN-U)	CAN-U is a loose coalition of non-governmental organizations advocating for climate adaptation justice in Uganda. Its secretariat is hosted by Oxfam Great Britain in Kampala, Uganda.

¹ These entities are not included in Figure 2. They are, however, relevant for this research on water–gender–climate change interactions.

**Table 3.** Key policy documents

Title	About
Overarching laws and plans	
Constitution	The Ugandan Constitution, the supreme law, adopted in 1995, lays out the basic structure of the government, responsibilities assigned to each government entity, national goals, and rights and duties of citizens.
Uganda Vision 2040	Uganda Vision 2040, officially launched in April 2013, is the long-term development blueprint for the country that aims to transform Uganda from a “Peasant to a Modern and Prosperous Country within 30 years.” This vision will be achieved through five-year National Development Plans (see below).
National Development Plan (NDP II) 2015/16 –2019/20	National Development Plan 2015/16 –2019/20 (NDPII) is the second in a series of six five-year Plans aimed at achieving the Uganda Vision 2040. The NDP II serves as the most powerful guide for investment planning, budget allocation and social interventions in the country—all government programs are linked to the NDP within the existing policy, legal, planning, monitoring and reporting systems. The Water and Environment sector subscribes to the strategic objectives and interventions under NDPII (e.g., in formulation of its development plan).
Sector-specific acts, plans and strategies	
Water	
The Uganda Water Action Plan (WAP) 1993–94	The plan was prepared in 1993–94. It provides the overall guidelines and strategies for the protection and development of Uganda’s water resources and a structure for their management at national, district and local levels. It also provided inputs to the formulation of the National Water Policy.
Uganda National Water Policy (1999)	This provides the overall policy framework for the water sector and promotes the principles of IWRM. Also, the water policy specifies that both women and men should have equal opportunities in community management, including water and sanitation committees.
Water and Environment Sector Development Plan 2015/16–2019/20	Developed by the MWE, the plan aligns with the NPD II objectives and outlines key sector priorities and interventions.
The Water and Sanitation Gender Strategy (WSGS III) 2018–2022	This is the third Water and Sanitation Gender Strategy which helps mainstream gender into the sector’s plans and activities. Its goal is “to empower men, women, boys, girls and vulnerable groups through ensuring equity in access to and control of resources in the water and sanitation subsector, contributing to poverty reduction.”
Gender	
The National Gender Policy (1999)	The policy is developed by the Ministry of Gender, Labour and Social Development (MoGLSD). It recognizes women and children as the main carriers and users of water. It makes gender responsiveness mandatory for development practitioners in terms of planning, implementation and management of water and sanitation initiatives. This policy’s main objective is to “mainstream gender concerns in national development processes through guiding resource allocation in all sectors to address gender inequality.”
Climate Change	
National Climate Change Adaptation Program of Action (NAPA) (2007)	In 2007, adhering to UNFCCC’s requirements, Uganda developed and submitted its National Adaptation Programmes of Action (NAPA) to UNFCCC. The NAPA includes a list of the following nine priority projects, many of which are yet to be rolled out and implemented (MWE, 2015): 1. Community tree growing 2. Land degradation management 3. Strengthening meteorological services 4. Community water and sanitation 5. Water for production 6. Drought adaptation 7. Vectors, pests and disease control 8. Indigenous knowledge and natural resource management 9. Climate change and development planning



Title	About
Sector-specific acts, plans and strategies (continued)	
Climate Change	
National Climate Change Policy (MWE, 2015)	The goal of the National Climate Change Policy (NCCP) is to “ensure a harmonised and coordinated approach toward a climate- resilient and low-carbon development path for sustainable development in Uganda.” The policy is prepared and designed within the context of the country’s vision and national development priorities.
Climate Change Law	The National Climate Change (NCC) Law is developed and currently awaits Cabinet and Parliamentary approval. The law aims to provide a legal framework for strengthening implementation and coordination of climate change actions, support monitoring and implementation enforcement by various actors.
Other Related Policies	
Local Government Act (1997)	Provides for the decentralization of services, including the operation and maintenance of water facilities for local governments in liaison with the ministries responsible for the sector.
1998 Land Act (amended in 2004)	Recognizes women's rights to land and customary ownership of land. It also forbids any discrimination in local "customary" rules.
Public Finance Management Act (2015)	The Act introduced an innovative certification system, whereby all ministries, departments and agencies have to show how they will integrate gender considerations before their budget is approved. The law mandates the minister responsible for finance in consultation with the Equal Opportunities Commission to issue a Gender and Equity Compliance Certificate that certifies that the budget framework paper is gender- and equity-responsive and specifies measures taken to equalize opportunities for women, men, persons with disabilities and other marginalized groups.



3.0 Assessing Linkages in Institutions and Policies

This section summarizes the links between the water, gender and climate change sectors in Uganda, drawing out specific references and examples from the summarized institutions and policies.

3.1. Water and Gender

Water and gender issues in Uganda are becoming increasingly integrated through the policy and institutional systems of governance. Gender is deemed a cross-cutting policy issue (MWE, 2017b; Government of Uganda, 2007a) which needs to be incorporated into planning, budgeting, and monitoring in different sectors, including the water sector.

Gender Mainstreaming

Mainstreaming of gender into sectoral policies, programs, administrative and financial activities through a number of acts and strategies is an important recent development in Uganda at both national and local levels. Gender mainstreaming aims to achieve gender equality and women's empowerment to advance Uganda's socioeconomic development (Office of The Auditor General, 2015). Currently, the Ministry of Gender, Labour and Social Development (MGLSD)—together with gender focal point persons and units in different ministries—assumes the lead political and technical role in mainstreaming gender into government policy and programming.

What is gender mainstreaming?

According to the Uganda Gender Policy (2007):

Gender mainstreaming is a conscious approach of an organisation to take into account gender equality concerns in all policy, programme, administrative and financial activities as well as organisational structures and procedures.

It is based on a political decision to work towards and finally achieve the goal of gender equality within the organisation, thus contributing towards gender equality in the respective society.

It involves applying a variety of measures, providing resources (financial, human, time, information) and ensuring a process of learning and transformation.



Gender mainstreaming is supported by a number of plans, acts and strategies, namely:

Uganda Gender Policy (UGP) (2007)

The UGP aims to build capacity for gender mainstreaming across all sectors/stakeholders to achieve gender equality and women's empowerment in Uganda. The ministries are required to translate the UGP into sector-specific strategies and activities. This includes, for example, building capacity of staff in gender analysis, planning, and budgeting, disaggregating data and information by sex and gender where applicable. The policy also requires ministries to commit resources to implement these activities. As a result, the success of the UGP is dependent on the actions undertaken by all levels of government and by all stakeholders.

MGLSD is responsible for ensuring that the policy is effectively implemented within the overall government system and frameworks through monitoring and evaluation. It sets standards and develops guidelines, providing technical support and advice to sector gender working groups, focal points, local governments, civil society and private sector entities on gender mainstreaming.

The Ministry of Finance is responsible for mobilizing, allocating and releasing resources for gender mainstreaming activities. MGLSD assists the process through a Gender Responsive Budgeting Unit in the Ministry of Finance (UNDP Uganda Gender Equality Strategy 2014–2017).

National Water Policy (1999)

UGP is applied to the National Water Policy to promote a sustainable approach to water management. Among its guiding principles, the policy adopts the recognition of “the essential role of women in the provision, management and, safeguarding of water.”

National Development Plan 2015/16–2019/20 (NDPII)

NDPII specifies that Water and Sanitation subsector will focus on incorporating gender concerns among other priorities. No further elaboration is provided under ‘Objective and Strategic Interventions’. Social Development Sector’s objectives and interventions, however, include achievement of gender equality and women’s empowerment in the development process, with one of the interventions being to “Mainstream gender and rights in policies, plans and programmes in sectors and local governments.”

Water and Sanitation Gender Strategy 2018–2020 (WSGS III)

The WSGS III, revised from WSGS II (2010–2015), outlines ways to mainstream gender into all activities related to water and sanitation. This mainstreaming is to be achieved through four key strategic activities:

- Internal transformation
- Partnership, coordination and collaboration
- Research, documentation and dissemination
- Capacity building and staffing

The strategy presents roles and responsibilities of various parties and financing options. Moreover, it provides a detailed results framework including objectives, indicators, targets and responsible entities. WSGS III aims to improve on the previous version of the strategy and demonstrates that the government is learning from its processes and evaluations.

As one of the outcomes of the gender mainstreaming process through UGP, *gender focal points* (GFPs) have been appointed at the local government level. These officers have a background in social sciences/humanities and have an understanding of community and gender dynamics (MWE 2018).



Despite significant progress in addressing gender inequalities in policies, plans, projects, institutions and laws, a number of authors/sources have identified *typical challenges* associated with gender mainstreaming in Uganda, more specifically:

**UNDP Uganda,
Gender Equality
Strategy, 2014–2017**

The study points to some notable gaps and omissions in NDP II such as *no mention of gender* in the areas dealing with mining, environment and natural resources, trade and competitiveness, industry, transport, *water for production*, and information and communication technology (ICT).

It also notes uneven sector responses to the gender issues at hand. The study concluded that progress on gender issues is hindered by the limited expertise in gender analysis of projects and programs, lack of gender-disaggregated data, and inadequate technical and operational support.

The capacity of the MGLSD to help mainstream gender is limited due to inadequate resources and staffing. The number of technical staff working on gender in MGLSD declined from 33 in 1995 to 10 in 2014. In addition, for fiscal year (FY) 2017/18 the approved total budget—including external financing—for MGLSD was only 0.6 per cent of the total national budget to cover its entire portfolio (Ministry of Finance, Planning and Economic Development, 2017).

**Gender Impact Study
of the Water and
Sanitation Sub Sector
(Ministry of Water and
Environment [MWE],
2017)³**

“Gender is not strongly mainstreamed in monitoring, evaluation and reporting, but rather presented as a standalone aspect” (p. 17).

**Acosta, Ampaire, Okolo
& Twyman (2015)**

The shared responsibility on gender mainstreaming by all ministries and stakeholders “has in a way become ‘no man’s land,’ where no clear structures of enforcement or monitoring mechanisms have been established to support the gender mainstreaming activities in the different ministries and district offices” (p. 3).

**Office of The Auditor
General (2015)**

At the *district level*, evidence suggests that the capacity for gender mainstreaming is lacking. The report studied gender mainstreaming activities in Wakiso district⁴ and concluded that “although the district had performed well in gender mainstreaming, according to the annual local government assessment results, there was no evidence in regard to gender analysis, gender-disaggregated data, monitoring indicators, and consideration of gender-specific needs in the capacity needs assessment” (p. iii). Moreover, there is also no evidence on how GFPs are appointed and posted, which raises questions around the Ministry of Local Government’s assessment criteria and methodologies.

The review of the available plans and strategies revealed that a number of key activities are commonly associated with gender mainstreaming. These include governmental staff training, collection and dissemination of gender-disaggregated data, gender budgeting, women representation in decision making and women’s technical and leadership training. These topics are further discussed in the following subsections in relation to the water sector. Elaborating on these enables a better understanding of specific policy mechanisms in place to support these activities, targets and progress, and ultimately highlight specific gaps and challenges.

² Evaluation of the WSGS II 2010–15.

³ This district receives the second highest amount of funding from the central government and services the highest population in Uganda compared to other districts.



Gender Budgeting

Gender budgeting refers to the ways that ministries, departments, agencies (MDAs) and local governments can address gender issues through planning and budgeting processes. In Uganda gender budgeting does not have constitutional standing; however, a sufficient legal framework exists to support gender budgeting at all levels. Our research reviewed specific key documents related to gender budgeting, outlined responsible entities, and assessed progress and challenges. These include the following:

The National Gender Policy (2007) instructs the Ministry of Finance Planning & Economic Development to mobilize, allocate and release resources for gender mainstreaming activities. According to this policy, the ministry needs to ensure that gender-targeted activities are given priority and visibility in budgets and that adequate funding is allocated.

First Budget Call Circular for 2017/18, and more recently for 2018/19 gives the official guidelines on budget preparation, specifies that sectors should align their respective Budget Framework Papers (BFP)⁴ to the NDP II outcomes, and reflect these in the semi-annual and annual performance reports.

In terms of addressing gender concerns specifically, the document notes that over the years sectors had only provided general statements on gender and equity without developing concrete actions. Therefore, it instructs sectors to demonstrate specific actions to address gender and equity issues in FY 2017/18 in their respective BFPs. This implies formulating actual selected interventions and proposed budget allocation. The document further states:

It is now mandatory for MDAs and Local Governments to ensure Gender and Equity issues are mainstreamed though [sic] gender-responsive budgeting and it is a legal [sic] for my Minister to certify the budgets for gender and equity responsiveness, before submission are made for Budget Estimates, and Ministerial Policy Statements to Parliament.

A Gender Impact Study of the Water and Sanitation Sub Sector (MWE, 2017a), which evaluated WSGS II 2010–2015, found some evidence of the implementation of this regulation at the local level. The study showed that some districts acknowledged that approval of budgets was dependent upon inclusion of gender issues.

In connection with agricultural water development, the **National Water Policy (1999)** states that in planning and allocation of public funds, investment subsidies will be given to vulnerable groups, including women, youth, poor farmers and the disabled, especially in drought-prone areas.

Another development that affects planning and budgeting is the introduction of the Certificate of Gender and Equity for Ministries Departments and agencies (MDAs) under the Public Finance and Management Act (2015). The certificate is issued by the minister responsible for finance in consultation with the Equal Opportunities Commission (EOC) for each ministerial policy statement. It ensures that proposals are non-discriminatory and equalize opportunities for women, men, persons with disabilities and other marginalized groups (Civil Society Budget Advocacy Group [CSBAG], 2017).

⁴The Sector Budget Framework Paper (BFP) lays out the budget strategy for the sector and specifies sector objectives and performance targets for a given financial year. The Sector BFP contribute to the National BFP, which is presented to Parliament by the 31st of March each year (Uganda Budget Information, n.d.).



EOC reviewed a total of 16 sector budget framework papers to assess how these regulations are implemented in practice for gender and equity inclusion (CSBAG, 2017). Based on a set of 13 targeted areas of compliance (e.g., Commitment of funds to G&E Outputs,⁵ Responsiveness of Sector Objectives and Outcomes to G&E), it calculated compliance scores for each sector, with national score being 60 per cent,⁶ which is interpreted as “good performance.” The Water and Environment sector scored 64 per cent (Good Performance) and the Agriculture sector 51 per cent (Fair Performance). All sectors that scored 50 per cent and above were issued Gender and Equity Certificates of compliance (CSBAG, 2017). Only one sector scored below the pass mark—The Energy and Mineral Development (39 per cent). The sector BFPs that do not meet the pass mark are sent back for revision with guidance from EOC made on each of the performance areas.

Overall, gender-responsive budgeting is increasingly recognized in Uganda as an integral part of gender mainstreaming. Important steps have been made in legislation, the role of the Ministry of Finance is defined, and MDAs and Local Governments are encouraged to both identify concrete gender and equity interventions and specify funding allocations. Evidence from the district level suggests that funding is contingent upon a set of criteria including gender (MWE, 2018). Moreover, the innovative approach—gender and equity certificate issued to each ministerial policy statement—shows real commitment to work on gender issues.

There is evidence to suggest that the water and sanitation subsector’s budgeting considers gender to some extent, although it is not fully mainstreamed (MWE, 2017a). Funding for the WSGS II 2010–2015 had been limited, not only in terms of funding the strategy, but also funding the water and sanitation sector as a whole (MWE, 2017a). Nevertheless, WSGS II included budget estimates for implementation of gender-specific activities, whereas the new WSGS III does not provide a costed action plan and only identifies sources for financing the strategy.

Gender and equity budgeting is a newer concept in the country’s governance structures. The sector institutions are at different levels of knowledge of gender budgeting, and capacity for gender mainstreaming is not yet well developed (Ministry of Finance, Planning And Economic Development, 2017).

The MoFPED observed that sectors often provided blanket or general statements about how they planned to address gender inequality in the BFPs (MoFPED, 2015). The Civil Society Budget Advocacy Group (2017), for example, also notes that sectors have limited capacity in gender and equity budgeting, planning and programming. Furthermore, EOC notes that it is difficult to ascertain the exact amount of money going into promoting gender and equity in FY 2017/2018 (Equal Opportunities Commission, 2017). Therefore, Uganda’s budgetary process is still not gender-responsive enough to have a sustainable impact on gender equality.

⁵This area is attributed the highest weight (30 per cent)

⁶ From 0 per cent to 100 per cent.



Decision Making Around Water Issues: Representation of women

Gender stereotypes, customs and practices that undermine equal opportunities have resulted in limited capacity for women in Uganda to effectively participate in leadership and decision making around water issues (Ministry of Finance, Planning And Economic Development, 2017; Government of Uganda, 2007b).

To promote fair representation, some acts and laws assign quotas for women and instruct agencies and institutions to report on the implementation of these. This research summarizes the strategies for improving women's representation related to water management, including mandatory quotas for women in various governance structures.

National Level

WSGS III

Strategic Objective 2 within this strategy focusses on "capacity enhancement and promotion of gender-sensitive work environment." The strategy targets increased women's representation at the Ministry of Water and Environment and applies an evaluation indicator looking at the "percent increase in number of female staff employed at the ministry" (p. 34).

Local Level

The Constitution of Republic of Uganda (1995)

Under Article 180, the Constitution requires that one-third of the membership of each local government council be reserved for women. This Article is operationalized in both the Local Governments Act (1997) and the Gender Policy (Amended 2007). The Local Government Act (1997), Article 23: a sub-county council, a city division council, a municipal council, a municipal division council, a town council "shall consist of women councillors forming one-third of the council."

National Water Policy (1999)

At the village level the policy emphasizes that all water user committees (WUCs) should have at least 50 per cent women representatives. This policy has been further supplemented by a requirement for all WUCs to have at least one woman holding a key position (Nsubuga et al., 2014).

Water and Environment Sector Development Plan 2015/16-2019/20 WSGS III

For rural areas, the plan specifically outlines mobilizing and promoting participation of men and women in the management of water systems as an objective and the need to encourage women to take up decision-making positions in the WUCs.

The strategy sets a target for the District Local Governments to have at least 90 per cent of WUCs with women in key positions.

Ministerial Policy Statement (MWE, 2017b)

Ministerial Policy Statement for Water and Environment summarizes the past performance of the sector and also formulates anticipated activities and expenditures. The statement identifies sectoral challenges and presents costed strategies to overcome them. The planned intervention for FY 2017/18, under Vote 501-850 Local Governments with regard to Gender, is to achieve *at least one third of the executive (key) positions*⁸ on the water user committee occupied by women. The target has a budget allocation of Uganda Shillings (UGX) 0.050 billion (approximately 13,500 USD). The indicator of progress is "Women occupying a third of the key positions of the executive of the water user committee."

⁷ Chairperson, vice chairperson, secretary, and treasurer.



The summarized laws and strategies have achieved increased representation of women. The most recent statistics on women representation in decision-making roles in water sector are given below.

National Level

According to the data presented in the Uganda Water and Environment Sector Performance Report, 2017 (MWE, 2017c) (see Table 3), MWE had 326 staff members of which 109 (33 per cent) were female. Even though on average it may appear that women are visibly represented in the ministry, a further look at the statistics reveals that they tend to occupy mostly lower-level supporting positions. At the top management level, women occupy 15 per cent of positions and only 20 per cent at the middle management level, compared to 54 per cent at operational and 40 per cent at support levels. This indicates that women do not hold equal decision-making power with men in the Ministry of Water and Environment.

Table 4. Ministry of Water and Environment staff statistics – sex-disaggregated data.

Staff level	Female		Male	
	No.	%	No.	%
Top Management	6	15%	32	85%
Middle Management	22	20%	90	80%
Operational	42	54%	36	46%
Support ⁹	39	40%	59	60%
Total	109		217	

Source: MWE, 2017c.

Moreover, looking at the trend over time shows that female representation among MWE staff for a period of four years (2014 to 2017) has not increased considerably. In fact, a declining representation of women in top management positions is observed—from 23 per cent in 2014 to 15 per cent in 2017 (MWE, 2017c).

There have not been any explicit requirements for the National Water and Sewerage Corporation (NWSC) with regards to women's empowerment and representation, even though the company employs a large number of staff (3,131 employees). Nevertheless, Uganda Water and Environment Sector Performance Report (MWE, 2017c) points out that the NWSC's attributes due importance to gender issues when recruiting staff. Out of the corporation's seven directorates, four were headed by women by the end of June 2017. Overall, 30 per cent of staff in the NWSC are female. It remains important to continue to prioritize gender issues at the organization (MWE, 2017a).

⁹ Mostly, social scientists, secretaries, office attendants and cleaners who do not have much impact on decision-making.



District Level

At the district level the Gender Impact Study of the Water and Sanitation Sub Sector (MWE, 2017a) which evaluated WSGS II 2010–2015 implementation, concluded that females were grossly under-represented in the District Water Offices (DWOs)⁹, which is also supported by the Uganda Water and Environment Sector Performance Report (MWE, 2017c). According to the gender analysis conducted as part of the Gender Impact Study of the Water and Sanitation Sub Sector (MWE, 2017a), there were only three female District Water Officers, in the districts of Kibaale, Kibuku and Lamwo, out of 115 Districts studied.

Data from MWE's Water Supply Data Base (Uganda Water Supply Atlas, n.d.) indicate that the percentage of WUC with women in key positions has remained at 86 per cent in FY 2016/17. However, most women tend to occupy treasurer positions (72.5 per cent). For the positions of Chair and Vice Chair, committees tended to be dominated by men—69.8 per cent and 58.3 per cent respectively (MWE, 2017a). Asaba et al. (2017) note that the participation of women in rural WUCs is minimal.

Even though there has been an improvement in the number of women in political leadership, more needs to be done. Some of the issues brought up in reviews and assessments are as follows:

- First of all, higher level representation of WUC at district and national levels is lacking, especially for women to be able to express their opinions and minimize delays and distortions around water-related issues (Naiga et al., 2017).
- Second, the lack of control over recruitment at the ministry level poses difficulties. Recruitment for the water sector is advertised and handled by the Public Service Commission, which has a different mandate from the water sector. This has had a negative effect on the Directorate for Water Development's (DWD's) goals to improve their male/female staff ratios (GWA & UNDP, 2006). This situation points to the need for better coordination of gender priorities among sectors of government. The recruitment and staffing questions, however, have been somewhat addressed in the revised WSGS III. It included instructions for human resources departments on staffing and recruitment and outlined a number of related indicators, including the outcomes indicator “percent increase in number of female staff employed at the ministry.”
- Third, no explicit instructions or statistics on gender representation have been found for the catchment-level organizations—Catchment Management Organisations (CMOs), Catchment Management Committees (CMCs) and Catchment Technical Committees (CTCs). It is unclear whether the 30 per cent target is applied to the catchment-level committees. MWE (2016), however, stated the representation of women in catchment/sub-catchment management committees was inadequate.
- Lastly, local-level representation is closely tied to women's land ownership challenges and low literacy levels (Naiga et al., 2017). At the level of Water User Committees, women's limited control over the land means that they are less likely to contribute to decision making around water infrastructure installation, operation and maintenance.

⁹The DWOs' responsibility is to plan, implement and monitor all water and sanitation activities in the district. They are responsible for ensuring that the District Community Development Office (DCDO) and/or Gender Office (GO) are part of the District Water and Sanitation Coordination Committees (DWSCCs) and help them participate in sector software activities, including planning, implementation, monitoring and evaluation (WSGS III).



Training for Government Staff in Gender Mainstreaming

Government staff training is a necessary step in building capacity for all aspects of gender mainstreaming in the water sector (e.g., planning, formulating interventions, setting up performance targets, implementation and monitoring).

The importance of staff training is recognized in various plans and strategies, and training targets sometimes have funding allocation attached to them as in the case of the Ministerial Policy Statement (2017).

Some targets for training from major strategies and documents are presented below:

Ministerial Policy Statement (MWE, 2017b)

Under MWE's objective to enhance capacity of water and sanitation sector stakeholders for gender mainstreaming (Vote:019 - Ministry of Water and Environment), for FY 2017/18 the Ministry was planning to

- i. Build capacity of 120 Local government staff in gender mainstreaming
- ii. Build capacity of 100 extension staff in participatory methodologies
- iii. Monitor gender mainstreaming activities.

A budget of UGX 0.040 billion (approx. USD 10,800) was allocated for these interventions.

Moreover, the following performance indicators have been identified:

- i. Number of staff trained in gender mainstreaming
- ii. Number of extension staff trained in participatory methodologies
- iii. Number of monitoring visits undertaken in districts.

WSGS III

The strategy sets targets for staff training across a number of departments for the period of 2018–2022:

- i. At the national/ministry level: At least 70 per cent of ministry staff undertake gender mainstreaming training by the end of five years.
- ii. At the local level, under capacity building and knowledge sharing: "Ensure all water and sanitation committees, water management boards and zones committee trainings at district and community level, integrate gender using participatory methodologies."



Progress in Training

The WSGS II (2010) had a target of training 80 per cent of MWE and District Water Office staff in gender mainstreaming by the end of FY 2014/15. By the end of the planning period 41 per cent (138) of the MWE staff had been trained, of whom 52 per cent were female (MWE, 2018). The training focused on the thematic areas of: Gender and Equity budgeting, Gender and Economic Policy Management, Gender mainstreaming in Integrated Water Resources management, and Gender Analysis (MWE, 2018).

More resource commitment is required to effectively train staff in gender mainstreaming at all levels. Acosta et al., (2015) interviewed officials from the district level in Rakai and Nwoya districts and found that district policy officers had limited knowledge and skills on gender, with most of the policy officers consulted having received little or no gender-related training. Even though gender is used as an indicator for the performance reviews of policy officers, it is only used in the limited sense of the “number of women invited to programs and activities” (MWE, 2018).

Training for Women and Girls

Training for women and girls aims to tackle the small presence of women in technical and management positions, and thus enhance their capacity to be leaders in the water sector and be empowered to contribute to water-related debate and decision making.

Training may encompass improving technical skills (such as handpump repair and maintenance) while improving leadership training for the women at the WUC level. Furthermore, it can include training in business enterprises and financial literacy to help women develop their income potential and become financially independent.

The Uganda Water Action Plan (WAP) (1993–94)

In Chapter 5 “Domestic Water Supply, Management and Sustainability Aspects,” the plan specifies that “Women’s involvement in design, construction, operation and management of improved water supply and sanitation facilities should be supported through training activities.”

Under Chapter 6 “Water for Agricultural Production” the plan specifies that capacity-building efforts should concentrate on training of women and youth to enhance equal opportunity for their participation in management of the schemes.

National Water Policy (1999)

“Women’s involvement in design, construction, operation and management of improved water supply and sanitation facilities should be supported through training activities. The key criteria is [sic] that women and men should have equal opportunity to participate fully in all aspects of community management” (p. 19).

Ministerial Policy Statement (MWE, 2017b)

The planned intervention for FY 2017/18, under Vote:019 Ministry of Water and Environment with regard to Gender, is to train female handpump mechanics and to empower women through training to enhance their participation on the management committees. Two performance indicators correspond to this objective: Number of female handpump mechanics trained, percentage of women on management committees holding key positions. Budget allocation for this intervention is UGX 0.150 billion (around USD 40,500).



The Gender Impact Study of the Water and Sanitation Sub Sector (MWE, 2017a) which evaluated the second WSGS (2010–2015) provided recommendations on skills enhancement and economic empowerment of women. The study recommended that the following activities be implemented in the new WSGS:

- i. Design vocational, entrepreneur, managerial and numeracy skills training programs targeting especially women and youth. The curricula should be flexible to fit rural men's and women's needs.
- ii. Consider skills training in gardening, block making, sewing and weaving.
- iii. Provide post-training services such as access to credit or savings programs, business development services, training in marketing etc.
- iv. Design and promote micro-lending programs.
- v. Promote formation of savings and credit groups/cooperatives.

The new strategy addresses some of the summarized training recommendations as part of its objectives, performance indicators and targets. It emphasizes economic empowerment across all levels.

At the local level, the strategy aims to create water supply and sanitation employment and entrepreneurship opportunities ensuring that at least 30 per cent of the non-technical labour such as potters, excavators, cooks and local masons are women.

The strategy also emphasizes financial literacy training across various groups and committees under “access to credit and financial services,” e.g., requiring that the rural water department, the water for production department, and the procurement unit integrate financial literacy training at various committee trainings, including WUC trainings.

The strategy also prioritizes business enterprising and financial management training at WUC training sessions, as well as training in income-generating activities such as tree nurseries, making crafts, briquettes etc. in both rural and urban areas. The strategy sets a target of 30 per cent of new WUCs trained in income-generating activities by FY 2019/20. Are women able to access this training as effectively as men given current WUC composition?

The WSGS III targets in the results framework mostly focus on training for the committees (and therefore not targeting especially women and youth as recommended in the Gender Impact Study of the Water and Sanitation Sub Sector [MWE, 2017a]) and monitoring employment statistics such as women being hired as non-technical staff and women managing water kiosk and tap stands on new water supply and sanitation projects. Nothing is mentioned regarding design and promotion of micro-lending programs.

Lack of technical training, low literacy levels, and the inability to make informed financial decisions all act as barriers to women's effective participation in the development process. The recognition of these issues is made in the newest Water and Sanitation Gender Strategy—indeed, many important interventions have been identified and targets set. However, better alignment of these activities with the recommendations of the Gender Impact Study of the Water and Sanitation Sub Sector (MWE, 2017a) is needed.



Monitoring and Reporting

In order to conduct quality gender analysis to inform decisions in the water sector, a good monitoring and reporting system is required that effectively collects, disseminates and monitors sex-disaggregated data in a number of areas.

Uganda has made progress in this respect. The following list outlines recommendations and requirements made in strategies and plans and sex-disaggregated data currently collected:

National Gender Policy (2007)	One of the strategies of the policy is “Ensuring the collection, retrieval, compilation, packaging and dissemination of gender-disaggregated data (GDD)” [by all sectors].
WSGS I (2003–2008)	Developed and adopted a gender indicator of women representation “% of Water and Sanitation Committee/ Water Boards in which at least one woman holds a key position,” which is one of the Water and Sanitation Sector (WSS) 10 golden indicators that measure WSS performance.
WSGS III (2018–2022)	The newest Water and Sanitation Gender Strategy emphasizes data documentation, monitoring and reporting under its gender documentation and reporting strategic objective. The proposed strategic activities are: I. Account for gender in all WASH golden indicators II. Develop gender-disaggregated data collection formats and template III. Account for gender reporting and dissemination
National Statistical System (NSS)	The Compendium of Concepts and Definitions on Gender Statistics¹¹ published by the Uganda Bureau of Statistics in 2013 reports that sex-disaggregated data are available for more than 20 key topics such as education, water use, poverty, crime and labour force participation. The Metadata sheets extracted from the National Statistical Metadata dictionary present a snapshot of gender-disaggregated data currently available in the National Statistical System (NSS). For the water sector the following indicators are available: i) Safe drinking (domestic) water coverage (disaggregation is by sex of household head) ii) Access to safe drinking (domestic) water iii) Water source functionality iv) Access to improved household sanitation (Uganda Bureau of Statistics, 2013a) Out of four water sector indicators, only “Safe drinking (domestic) water coverage” is disaggregated by sex.
Ministerial Policy Statement (MWE, 2017b)	A number of gender performance indicators were identified for monitoring FY 2017/18 planned interventions in the water sector, such as “Number of female hand pump mechanics trained,” “Percentage of women on management committees holding key positions” (note: although this indicator resembles the gender golden indicator “% of Water and Sanitation Committee/Water Boards in which at least one woman holds a key position,” it collects different information).

Moreover, the Uganda Bureau of Statistics (2013b)¹¹ summarizes data on the following indicators disaggregated by sex of household head: percentage distribution of household distance to water source, percentage distribution of toilet facility: it also provides gender-disaggregated information on percentage distribution of persons who usually collect drinking water for the household (Uganda Bureau of Statistics, 2013b).

¹⁰ The document is produced to “ensure that Gender Disaggregated Data is produced and availed to the end user” (p. ii).

¹¹ May not be a recurring study.



During the implementation period of the second WSGS (2010–2015) efforts were made to engender the WSS Golden Indicators and the M&E Systems, but the process was not completed (MWE, 2017a). The WSS reporting formats have not been revised to enable collection of gender-disaggregated data at all levels of implementation (MWE, 2017a). For effective gender mainstreaming, having only one indicator on gender was considered insufficient; and hence engendering all the 10 golden indicators was needed. The WSGS II review concluded that the following important gender indicators for the water sector have not been adopted: “the number of men and women who access different water technologies, affordability of water by male and female households and male and female private operators of piped water schemes” (MWE, 2017a).

One of the major drawbacks of the water sector’s evaluation system is the narrow focus on reporting centred on women’s representation on committees and boards. A number of documents discuss this drawback and recommend other types of gender-disaggregated data collected or collection methods. The most consistently collected gender data is for the golden indicator “% of Water and Sanitation Committee/ Water Boards in which at least one woman holds a key position.” Improving collection and dissemination of other gender-disaggregated data in a systematic way will help stakeholders move beyond interpretation of gender in terms of number of women in key positions to the other practical aspects needed to ensure gender-sensitive and gender-responsive analysis, planning, implementation, monitoring and reporting (MWE, 2017a).

Discussion and Challenges

In order to tackle gender-based inequalities, the Government of Uganda has formulated a gender-responsive regulatory framework and made deliberate efforts to integrate strategies that address gender inequalities into policies, plans and laws. However, the enforcement of existing gender and equity policies and regulations is weak (Ministry of Finance, Planning And Economic Development, 2017). There is a general lack of capacity to implement gender mainstreaming in all government departments including water and sanitation sector: lack of personnel and funds, inadequate technical skills at national and especially districts levels, absence of clear indicators for monitoring and evaluation (NDP II).

Gender analysis and monitoring in the water sector is too focused on representation of women in key leadership and governance positions, whereas less attention is attributed to tangible action plans, right financing and human resources to operationalize the plans (MWE, 2018).

Moreover, the mandatory quotas that allowed for high women’s participation in the political sphere do not guarantee the ability of women to influence policy decisions, which remains limited (UNDP, 2015). Women are still heavily burdened with responsibilities at home, especially in rural areas. Time-consuming household chores, low literacy levels,¹² lack of land ownership and control over resources impede women’s effective participation in decision making around water. However, it is in rural areas where the issues of poor water accessibility and poverty are felt most acutely and where women are often tasked with collecting water and farming to feed their families. Acosta et al. (2015, p. 2) note that “[i]n fact, the inclusion of women in participatory processes might translate into more work for women without any practical benefit for them.” The same study also found that embedded cultural norms prevent women from actively participating in district meetings despite increased attendance: women tend to remain quieter and less participative than men (Acosta et al., 2015). Thus far the policies developed at the higher level do not effectively translate into actions that take into account women’s interests, local contexts and preexisting inequalities.

¹² According to the Uganda Poverty Status Report (2001) current literacy rates stand at 63 per cent of the population. The literacy rate for women is 51 per cent compared to 77 per cent for men.



While there is significant progress in addressing gender inequalities through formal laws, a number of reports point to a lack of their adequate implementation and enforcement (MWE, 2018; UNDP Uganda, 2016; UNDP, 2015). More work is needed to advance implementation of gender mainstreaming activities in terms of funding, collection and use of gender-disaggregated data, building the capacity of government staff members in gender matters, and consistent and rigorous monitoring.

3.2 Water and Climate Change

Climate Change Impacts

Climate change is known to affect established surface water through prolonged droughts and increased flooding, which in turn can impact water quality. Changes in quality and availability of water resources due to climate change have a great impact on the well-being of people, including their health, food and water supply, and their livelihoods. For instance, climate change can have significant negative impacts on agriculture (e.g., lower crop yields) and health (e.g., increased incidence of malaria).

Uganda is experiencing a rise in temperatures that is leading to unpredictable and extreme weather events and landscape changes, which can be especially devastating for people's livelihoods in rural areas. For example, many local people rely on water from alpine rivers from the Rwenzori Mountains to irrigate their crops and generate hydroelectricity (Carrington, 2014). However, ice on the Rwenzori Mountains is melting at an accelerated rate. The Mountains have lost 40 per cent of their ice caps since 1955 (Lukwiya, 2009), and the glaciers are expected to be completely gone in the next 10 to 15 years (Carrington, 2014). The reduced flow into alpine rivers will severely impact water availability in local communities. Moreover, landslides will occur more frequently. The disastrous landslide on the steep slopes of Mount Elgon in 2010, caused by deforestation and heavy rains, erased villages and killed dozens of people (Mugenyi, 2010). These are just a few examples of the impact of climate change on people's livelihoods in Uganda. Clearly, urgent adaptation actions from a variety of sectors/stakeholders are required to prevent harm to people and the ecosystems they depend on.

The general institutional framework around climate change in Uganda is linked to its commitments at the international level. Uganda ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1993 and the Kyoto Protocol in 2002 (United Nations Climate Change, n.d.). Thereafter, Uganda submitted its First National Communication to UNFCCC in 2002 and its Second National Communication in 2014. Furthermore, as a Least Developed Country (LDC), it submitted its National Adaptation Programme of Action (NAPA) to the UNFCCC in 2007.

Climate change, like gender, is viewed as a cross-cutting issue in policies and plans and is both an environmental and development issue. In order to avoid scattered action over sectors the National Climate Change Policy (MWE, 2015) recommends the creation of an overarching climate change law, which is currently under development. No new entities are needed for climate change adaptation and mitigation in Uganda—researchers note that the work can continue within existing structures (Preller, 2010).

The connection between water and climate change is manifested at the institutional level. Nationally, the Climate Change Department is located under the Ministry for Water and Environment (MWE), which makes MWE the national focal climate change institution. Key players also include the Energy and agriculture Sectors (Preller, 2010).



A number of national documents, plans and strategies acknowledge the significant *impact of climate change on water resources in the country*:

Climate Change Policy (MWE, 2015)

The policy recognizes the adverse impact of climate change on water availability, which can affect economies and livelihoods and is particularly disruptive due to Uganda's heavy reliance on its natural resource base: "Droughts have significantly affected water resources, hydroelectricity production and agriculture, among many others" (MWE, 2015, p. vi). The policy also discusses the problem of melting mountain ice caps and the adverse impact it can have on the lives and livelihoods of rural communities and urban centres.

National Action Program for Adaptation (NAPA) (2007)

In discussing the vulnerability of water resources, the plan outlines the following impacts of climate change: prolonged and severe droughts leading to low water levels in rivers, reducing the potential for hydropower generation—thus resulting in interruption of economic activity and decline in manufacturing output; water shortages leading to loss of animals, lower milk production, food insecurity, increased food prices; floods causing pollution problems and contamination of drinking water, which leads to outbreaks of waterborne diseases such as cholera, typhoid and dysentery. The negative impact of climate change on the agricultural sector is also discussed (food insecurity, pest and disease epidemics, biodiversity loss, crop yield, etc.).

Among ranked adaptation priorities in NAPA, water resources is ranked third preceded by only land cover/land use and farm forestry.

NPDII 2015/16–2019/20

NDP II discusses competition for water uses and potential conflicts. The plan emphasizes the importance of integrating climate water into water resource planning to increase resilience in the water sectors and reduce emerging conflicts.

Short Course on Gender & Climate Change in Uganda Training Manual (Climate Change Unit, Ministry of Water and the Environment et al., 2013)

The manual is produced by the Climate Change Unit, MWE, MGLSD, Makerere University – School of Women and Gender Studies and the Gender Equality Studies and Training (GEST) Programme at the University of Iceland. The following impacts of climate change in Uganda are identified in the manual:

- I. *On water*: Changes in river flow regimes, water scarcity, flooding.
- II. *On agriculture and food security*: Malnutrition and famine, seasonal rainfall change, higher average rainfall, high intensity events, pastoralists.
- III. *On health*: Malaria, waterborne disease, respiratory disease, malnutrition and famine.

Climate Change Budgeting in Water Sector

First Budget Call Circular for 2017/18 (MoFPED, 2015) which provided official guidelines on budget preparation for all sectors for FY 2017/18, specifically required each MDA to identify possible climate change and environment issues, propose implementable activities, provide sufficient budgetary allocation and verifiable indicators. The document further stated that "*No Sector BFP will be accepted by this Ministry, unless there is evidence of incorporating and costing of sector-specific climate change interventions*" (p. 11).

This regulation points to the government's intentions to mainstream climate change in all sectors' activities while providing adequate funding. The success of this approach in practice must be investigated further. Nevertheless, with the regard to water sector, the MWE proposed to allocate UGX 3.246 billion (approx. USD 876,420) for Weather, Climate and Climate Change in FY 2017/2018. The breakdown of the allocation is presented in the table below.

**Table 5.** Budget Projections for Weather, Climate and Climate Change, FY 17/18

UGX billion	17/18 proposed budget
06 Weather, Climate and Climate Change	3.246
07 Meteorology	0.000
1102 Climate Change Project	3.106
24 Climate Change Programme	0.140

Source: Ministerial Policy Statement (MWE, 2017b) (p. 6)

Another investment into climate change is under Strategic Program for Climate Resilience (SPCR). The SPCR investments are estimated to cost USD 379 million and will be implemented through local institutional structures—the National Climate Change Coordination Committee (NCCPC), National Climate Change Advisory Committee (NCCAC), MoFPED and the Climate Change Department in the MWE. The purpose of the SPCR is to support government efforts toward achieving its strategic Vision 2040 and implementation of NDP II (2015/16–2019/20) programs. The criteria used to prioritize the investments in this SPCR include among other things “gender equity, involvement of vulnerable groups and inclusion of indigenous knowledge” (Government of Uganda, 2017).

Climate change budgeting in the water sector needs to be strengthened and rigorously monitored, especially since it is generally difficult to track specific investments into climate change from source through to disbursement (Climate Change Unit, 2013).

Information Collection on Climate Change

In order to better predict extreme weather events and increase resilience, efforts have been made to improve meteorological data collection and dissemination.

The Ministerial Policy Statement (MWE, 2017b) under the mission of sound management and sustainable utilization of water and environment resources for the present and future generations, formulated a strategic objective for FY 2017/2018 to increase the functionality and usage of meteorological information supporting sector-specific early warning to combat the effects of climate change and disaster risks.

As of December 2016, the MWE Weather, Climate and Climate Change Programme had conducted baseline surveys in 13 District Local Governments Arua, Yumbe, Adjumani, Koboko, Rubirizi, Ntungamo, Kanungu, Rukungiri, Gulu, Kitgum, Pader, Kole, Mbarara, and Bushenyi to highlight climate change impacts in different districts and update the district climate change profiles (MWE, 2017b).



Discussion and Challenges

As the review of climate change-related documents and plans demonstrates, the complex impacts of climate change on water are well-documented and vulnerabilities are clear. Nevertheless, climate change is still a new concept to many, especially in rural areas (CGIAR Research Program on Climate Change, Agriculture and Food Security [CCAFS], 2018). On the sector level there is a lack of general understanding of sector-specific climate change impacts (MoFPED, 2015) which impedes the implementation of actionable plans on Climate Change across various MDAs. Limited awareness on the climate change issues translates into scattered actions, very little implementation on the ground, and responding to disasters when they have already occurred. Moreover, limited resource capacity also slows down progress in addressing climate change challenges. Environmental Alert (2010) reports that Climate Change Unit has only five staff who are expected to provide technical guidance and support all over the country.

It was also identified that the Uganda NAPA did not specifically or directly mention Integrated Water Resource Management (IWRM) (Lukwiya, 2009).

Environmental Alert (2010) points to associated weak linkages between national-level institutions and local government stakeholders working on climate change. There are very few efforts to integrate climate change adaptation and mitigation actions in local government development planning process. Local farmers are disconnected from the districts, districts are disconnected from the national government (CCAFS, 2018).

More understanding of the linkages between various departments and actors is needed. One initiative attempting to link climate change institutions and policies at various levels is the Policy Action for Climate Change Adaptation (PACCA) project by Climate Change, Agriculture and Food Security & IFAD. It strives to achieve climate resilient and gender-responsive policies. The Climate change learning alliance module was developed to guide this process at national levels with people from districts invited to discuss the issues. It became a platform that brings together NGOs, government, service providers, media and other stakeholders.

3.3 Gender and Climate Change

Mainstreaming Gender Into Climate Change

The interaction between climate change and gender is acknowledged in some policies and plans, mostly regarding women's increased vulnerability to the impacts of climate change. While the notion of mainstreaming gender into climate change policies and plan is somewhat developed, the extent of actual mainstreaming is minimal. Gender and climate change issues are generally treated as cross-cutting issues, and not given priority or a clear funding allocation. No indicators connecting women and climate change have been devised, possibly due to the evolving understanding of climate change across sectors and departments mentioned earlier. However, some advances have been made as discussed in the following section.



Mainstreaming Gender into Climate Change—Policies and Plans:

Climate Change Policy (MWE, 2015)

The document identifies women and children as vulnerable populations and recognizes their key role in tackling climate change-related issues. Policy priorities include the mainstreaming of gender issues in climate change adaptation and mitigation approaches. However, no specific details are given in the policy as to how mainstreaming gender will be made possible, limiting the likelihood that gender will be prioritized (Aura, Nyasimi, Cramer, & Thornton, 2017).

Under policy-specific objective 1: “To identify and promote common policy priorities to address climate change in Uganda,” the document emphasizes inclusive adaptation and mitigation strategies: “The GoU must thus ensure that communities are empowered and that both men and women participate meaningfully in planning, testing and rolling out adaptation and mitigation activities in rural and urban areas” (p. 17).

In addition, the policy states that the “climate change response policies and activities must be gender-sensitive, and the capacity of relevant stakeholders at national and local levels to promote gender-sensitive approaches to climate change adaptation must be strengthened” (p. 17). No clarification is given as to what the phrase “gender-sensitive approaches” means in practical terms.

Acosta et al. (2015) criticize the National Climate Change Policy (MWE, 2015) stating that the furthest it goes is to state “The greater vulnerability of women is mostly due to gender inequality” but does not provide any clear pathway to action to tackle gender inequality in the country.

The Climate Smart Agriculture Framework (CSAF)

The document acknowledges that agriculture systems will suffer from climate change. Food production will be disrupted and subsequently the livelihoods and food security of millions of people, especially women. The program considers the challenges that women face regarding resources ownership, access to credit facilities and marketing of products, all of which are integral to development (Aura et al., 2017). The ministry responsible for agriculture is expected to regulate and promote value-for-money services to the benefit of women farmers, which underlines CSAF's significance. As a planned output, Climate Smart Agriculture (CSA) knowledge hubs are expected to be established across the country to support adoption of CSA practices and sustainable land management technologies by men and women. Moreover, gender-sensitive CSA training manuals and curriculums will be developed for use by communities. CSA will also be integrated and demonstrated in schools and vocational skills development programs.

Environment and Natural Resources Subsector Gender Mainstreaming Strategy 2016–2021, (MWE, 2016)

The purpose of the plan is to guide the Environment & Natural Resources (ENR) subsector to attain gender equity and equality in service delivery. The plan states that all DEA departments have gender focal point officers, and an ENR Gender Coordinator was recruited to coordinate all gender mainstreaming activities in the subsector. Among the seven departments in DEA, it was revealed that gender *has been mainstreamed highly in the Climate Change Department (CCD)*.

The strategy outlines the following achievements of the CCD in connection to gender mainstreaming:

- The unit has an operating gender training manual which has already been tested in seven districts of Eastern Uganda (see below).
- The department has developed a climate change policy.
- The department has developed a documentary on the impact of climate change on women and children.

Short Course on Gender & Climate Change in Uganda Training Manual (Climate Change Unit, Ministry of Water and the Environment et al., 2013)

A five-day course on Gender & Climate Change in Uganda by the CCD is designed to build local capacity in Uganda to design and implement gender-responsive climate change policies, strategies and programs. The course is tailored for senior officers from the district local governments, selected civil society organizations (CSOs) and teachers' representatives.

The course details the impacts of climate change on women: “reaction to diminishing water resources means that rural women will walk longer distances, line up at a crowded water source for long hours and carry the water on their heads to ensure access to water for the households ... reaction to diminishing biomass fuel means these same women will travel long distances to forest resources to cut down and utilize forest products which they carry on their heads to ensure cooking energy for the family needs” (p. 3). Such adaptation results in continuous depletion of natural resources and increased poverty and vulnerability for women.



Access to Information on Climate Change Adaptation Practices by Women and Men

Adequate access to information is crucial to developing knowledge and understanding of climate change issues and their implications to livelihood and economic development. Agriculture is key to overall economic growth and development of Uganda, so providing access to targeted, timely, and trusted information on long-term changes in weather patterns is essential for smallholder farmers in rural areas to have appropriate response options. This includes information on when and how to plant, what inputs to apply and when to harvest the produce (Kristjanson et al., 2015).

Unfortunately, many communities lack access to adequate information on weather and climate (as well as environmental rights and policies), which limits their preparedness for adaptation to climate change (Environmental Alert, 2010).

Kristjanson et al. (2015) surveyed farm households in Rakai in south-central Uganda to understand their perceptions of weather shocks, as well as how women and men access and use weather and agricultural-related information. The study found that access to different sources of information (i.e., extension agents, radio programs, etc.) is largely structured by gender and cultural factors. Many women do not receive information to support the activities they are largely responsible for. For example, just over half of the surveyed women received information related to post-harvest handling of food. The study documents the significant disparities in information access between men and women and the services gap that women farmers in Uganda face (see Table 6 for some of the examples).

Table 6. Sources of climate and agricultural information for women and men.

Information sources reaching:	Women	Men
Radio	86%	98%
Agricultural extension services	31%	67%
Farmers' organizations	12%	36%
Newspapers	1%	33%
TV	2%	14%

Source: Kristjanson et al., 2015.

The lack of prior awareness of farm management practices in response to climate change puts everyone, not just women, in a more vulnerable position with respect to livelihoods and food security (Kristjanson et al., 2015). Thus, unequal access to information needs to be taken into account when designing policies and programs.



Budgeting

According to the Gender and Climate Change in Uganda Training Manual (Climate Change Unit, Ministry of Water and the Environment et al., 2013), Uganda has no direct provisions of funds to support women in climate change mitigation and adaptation strategies.

However, as mentioned in the section on Water and Climate, the Ministry of Finance, Planning and Economic Development requires national, sectoral and district-level departments to integrate climate change in all plans and budgets (see MoFPED [2015] for mainstreaming Climate Change and Environment into the Sectoral BFPs). The same requirement is in place for gender mainstreaming, without any mention of the interface between the two for the purpose of formulating interventions and funding allocation.

There are no specific details on the amounts of money allocated for gender, women or youth in the connection to climate change in the Climate Smart Agriculture Framework (2015–2025) and Uganda’s National Climate Change Policy (MWE, 2015). Environment and Natural Resources Subsector Gender Mainstreaming Strategy 2016–2021 (2016) plans to allocate UGX 70 million (approx. USD 18,900) for a comprehensive gender assessment of the current ways of climate change budgeting, accounting and work planning in the selected sectors and a development of guidelines and checklists (p. 32).

Discussion and Challenges

Women are deeply affected by the impacts of climate change, including through changes in water availability, quality and access. For example, women are extensively engaged in smallholder agriculture (requiring and impacting water) and in water-dependent household chores. For these reasons, incorporating gender into climate change strategies, giving women opportunities to express views and access climate related information is necessary considering women’s increased vulnerability to climate change impacts. Unfortunately, as Nelson (2010) notes, women’s participation in climate change decision making in Uganda is inadequate at all levels.

Gender and climate change issues are not actively bridged in the institutional framework as in the case of water and gender, possibly due to climate change being a new concept for the sectors. Both gender and climate change issues are treated as cross-cutting issues, not given priority or a clear allocated budget in many of the reviewed policies. Moreover, gender mainstreaming is often an addition rather than an integral aspect of the respective policies.

Likewise, Aura et al. (2017) found that there is generally no capacity within existing government departments to consider gender in climate response activities. Recommended improvements include:

- Strengthen the capacity of gender focal points in all relevant institutions to connect climate change and gender. For example, ministries responsible for finance matters should have special departments and funds geared toward helping women in climate change responses.
- Design climate change curricula to include special responses for vulnerable persons.
- Conduct gender analysis of all budget lines and financial instruments for climate change to ensure gender-sensitive investments in programs for adaptation, mitigation and capacity building.



4.0 Conclusions

In Uganda, firmly entrenched customary laws and gender stereotypes affect women's capacity to engage in decision making and planning around water—a vital resource for everyday human survival and for the economy.

Women deal with water issues—access to safe water, water collection and handling—on a daily basis, especially in the rural areas of the country. Women tend to:

- a) *Collect more water than men* to meet family needs (e.g., for cooking and cleaning) in both urban and rural areas. Time taken to obtain drinking water for most rural households is more than 30 minutes (Uganda Bureau of Statistics, 2013b), taking women's time from other productive activities.
- b) *Engage in agriculture more than men.* Women comprise the majority of the labour force in the agriculture sector (MoFPED, 2015) which depends on water for irrigation and is very vulnerable to a changing climate. Women are more likely to notice the impacts of climate change on agricultural productivity, livestock and water availability according to Kristjanson et al. (2015).

Women have an informal role in local water management, yet they are often excluded from actively contributing to decision making in the formal structures, access less agricultural and weather information, do not have control over resources and bear more household responsibilities.

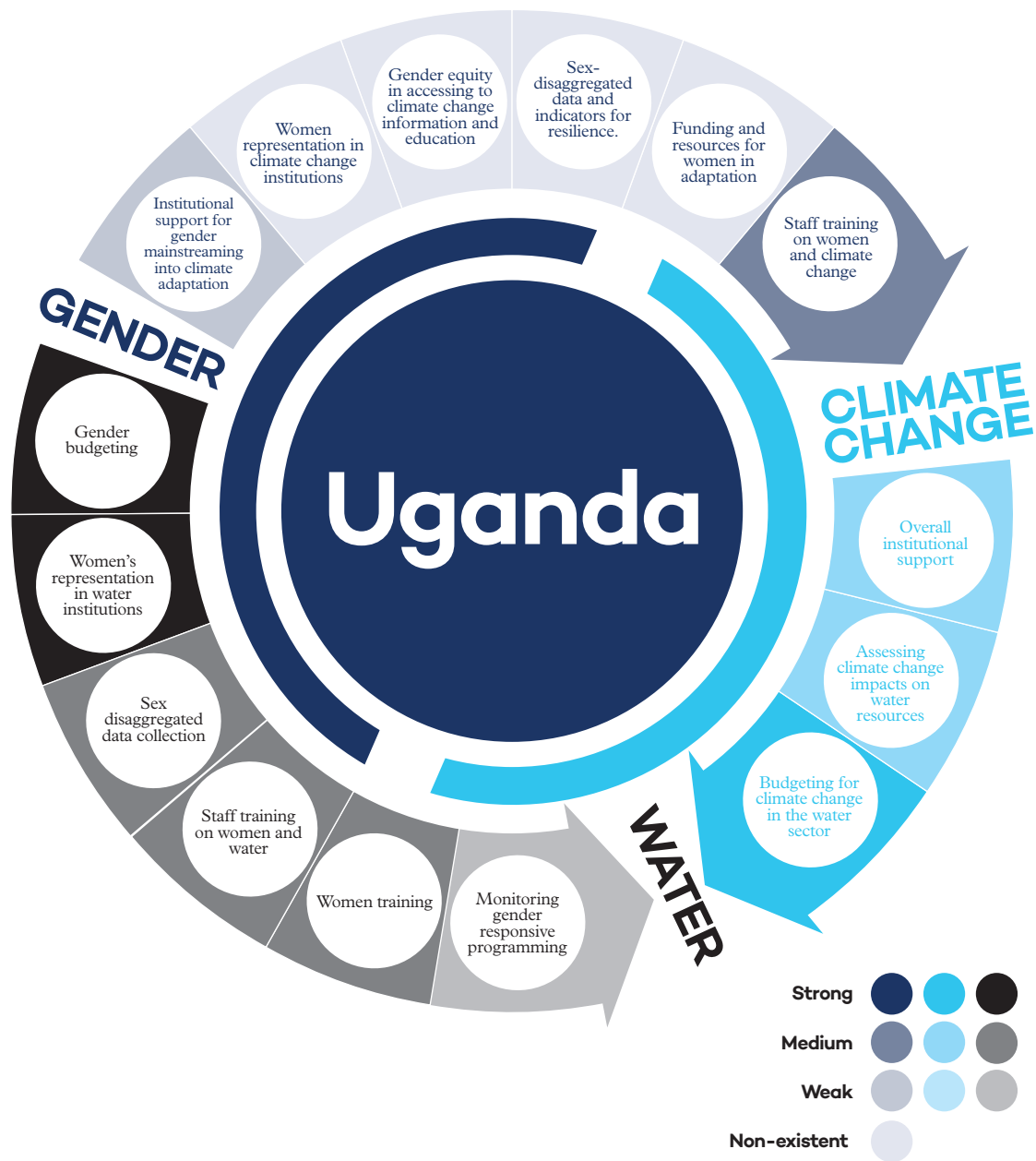
Nevertheless, evidence exists that representation of women in decision-making roles contributes to improved performance of projects and entities dealing with water issues. A World Bank evaluation of 122 water projects found that the effectiveness of a project was six to seven times higher where women were involved than where they were not (Water Supply and Sanitation Collaborative Council [WSSCC], 2006). Moreover, the results of the Gender Impact Study of the Water and Sanitation Sub Sector (MWE, 2017a) which evaluated the WSGS II (MWE, 2010), showed that the majority of water facilities with women holding a position of chairperson on the WUC were found to be normally or fully functioning (81.2 per cent) compared to only half (54.1 per cent) functioning normally where men occupied a similar position.

The Government of Uganda views gender inequality as one of the key constraints to higher growth and socioeconomic transformation of the economy. The recognition that women can play a crucial part in the development process has resulted in efforts being made to formally incorporate gender responsiveness in the country's legislation. The policies discussed in reports such as the National Gender Policy (Government of Uganda, 2007b), Water and Sanitation Gender Strategy III call for gender mainstreaming across governments sectors, and in the water and sanitation sector in particular.

Our analysis reveals that women's empowerment as part of the gender mainstreaming initiatives can be facilitated through institutions and policies by targeting a number of key areas—governmental staff training, collection and dissemination of gender-disaggregated data, gender budgeting, women's representation in decision making and women's technical and leadership training. Efforts were made in all of these areas, although with varying degrees of success, as presented in the Figure 3. The most significant progress of mainstreaming gender concerns into the water sector have been achieved in funding mechanisms (development of gender-responsive budgeting guidelines and their enforcement) and women's representation (quota for women's representation in water user committees, requirements for women to hold key positions).



Figure 3. Uganda’s progress toward inclusive and adaptive watershed management.



Women’s limited role in decision making around water supply—combined with challenges in accessing formal employment and productive resources such as land and credit—is an issue exacerbated significantly by changing precipitation, temperatures and evapotranspiration under changing climate systems. However, Uganda’s gender mainstreaming into climate change policy and institutions is virtually non-existent in a number of crucial areas such as funding for women in climate change adaptation, women’s representation in climate change institutions, gender equity in accessing climate change information and education, and data collection, monitoring and verification.



In spite of the general recognition and significant progress in addressing gender issues in policy development, there is still often a lack of practical understanding as to what mainstreaming of gender and climate change issues into sectoral activities at both national and local levels entails. Thus the implementation of policy and coordination between ministries become key challenges. Activities such as the collection and use of gender-disaggregated data, the funding of gender actions, training members of staff in gender matters—as well as monitoring of all these—are given different levels of attention. Moreover, customary laws and traditions still dominate formal policies.

In the agriculture sector, the interface between water, climate change and gender issues is very prominent, and adaptation and inclusive management is urgently needed. A lot of progress can be made in this sector taking into consideration the fact that “agriculture has been and remains central to Uganda’s economic growth and poverty reduction” (NDPII, p. 109) and, especially in light of the Vision 2040 statement to transform “Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years.” Furthermore, a focus on the district levels that are mainstreaming gender and climate change into development plans can prove beneficial since Uganda’s decentralized system of governance means that the local governments deliver many direct services (including water) and thus have a huge influence on the gender relations in society (Office of the Auditor General, 2015).

A deep-rooted issue that underpins much of the gender inequity related to land and water management is the issue of women’s right to own and lease land. Means to overcome entrenched customary laws on land ownership and related access issues will be instrumental in achieving the level of equity that many of the policies are built to achieve. This means that many of the newer laws providing women greater rights to land ownership and control must be enforced.

In addition, this research has compiled specific recommendations to better incorporate climate and gender responsiveness in water resources management. This includes measures to ensure that the information is distributed equally and effectively, that climate change adaptation measures are taught, that sufficient funding is secured and that women take an active part in the decision-making process.

While Uganda is showing leadership in its policy and institutional systems in relation to climate and gender mainstreaming in water management, efforts in these areas need to be strengthened in implementation and enforcement. We believe that the long-standing challenges of water access, food availability and natural disasters require these integrated approaches, without which the impacts of climate change could result in aggravated poverty, disease and inequality.

By establishing strong policies, institutions and mechanisms to mainstream gender and climate into water resources management, Uganda is spearheading change that has lessons for Africa and for many other parts of the world facing similar issues. Targeted research on implementation barriers and structural constraints can further enable these systems and expedite the goals we propose of adaptive and inclusive water management.



References

- Acosta, M., Ampaire, E., Okolo, W., Twyman, J. (2015). *Gender and climate change in Uganda: Effects of policy and institutional frameworks* (CCAFS Info Note). Copenhagen, Denmark. Retrieved from <https://cgspace.cgiar.org/rest/bitstreams/56517/retrieve>
- Asaba, R., B., Fagan, G., H., Kabonesa, C., & Mugumya, F. (2017). Women and access to water in rural Uganda: A review. *WH2O : The Journal of Gender and Water*, 3(1). Retrieved from <https://repository.upenn.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1021&context=wh2ojournal>
- Aura, R., Nyasimi, M., Cramer, L., Thornton, P. (2017). *Gender review of climate change legislative and policy frameworks and strategies in East Africa* (CCAFS Working Paper No. 209). Retrieved from <https://ccafs.cgiar.org/publications/gender-review-climate-change-legislative-and-policy-frameworks-and-strategies-east#WzQA3yBOmUk>
- Brebbia, C.A. (Ed.). (2015). *Water resources management*. WIT Press.
- Carrington, D. (2014). Last chance to see: Disappearing glaciers in the “Mountains of the Moon.” CNN. Retrieved from <https://www.cnn.com/2014/04/03/world/africa/last-chance-disappearing-glaciers/index.html>
- Civil Society Budget Advocacy Group (CSBAG). (2017). *Quick facts about government adherence to the certificate of gender and Equity in FY 2017/18*. Retrieved from <http://csbag.org/wp-content/uploads/2017/06/Quick-facts-about-Government-adherence-to-the-certificate-of-gender-and-equity-in-FY-2017-18.pdf>
- Climate Change Unit, Ministry of Water and the Environment; Ministry of Gender, Labour and Social Development; Makerere University – School of Women and Gender Studies; Gender Equality Studies and Training (GEST) Programme at the University of Iceland. (2013). *Short Course on Gender & Climate Change in Uganda Training Manual*. Retrieved from <https://gest.unu.edu/static/files/who-should-carry-the-burden.pdf>
- Environmental Alert. (2010). *Climate change in Uganda: Insights for long term adaptation and building community resilience*. Retrieved from <https://www.slideshare.net/JoshuaZake1/climate-change-issues-paper>
- Equal Opportunities Commission (EOC) (2017). *Assessment Report on Compliance of Ministerial Policy Statements with Gender and Equity Requirements Financial Year 2017/2018*. Retrieved from <http://csbag.org/wp-content/uploads/2017/06/ASSESSMENT-REPORT-ON-COMPLIANCE-OF-MINISTERIAL-POLICY-STATEMENTS-WITH-GENDER-AND-EQUITY-REQUIREMENTS-FINANCIAL-YEAR-2017-2018.pdf>
- Gender and Water Alliance (GWA) & UNDP. (2006, November). Uganda: Mainstreaming gender into policy: Examining Uganda’s Gender Water Strategy. In UNDP (2006). *Mainstreaming gender in water management* (Version 2.1) (pp. 226–228). Retrieved from <http://genderandwater.org/en/gwa-products/knowledge-on-gender-and-water/case-studies/Ench3235Uganda.pdf/>
- Government of Uganda. (2007a). Equal Opportunities Commission Act, 2007. Retrieved from <https://ulii.org/ug/legislation/act/2015/2-1>
- Government of Uganda. (2007b). *National Gender Policy*. Retrieved from: www.gou.go.ug/about-uganda/government-policies/national-gender-policy



- Government of Uganda. (2013). *Uganda Vision 2040*. Retrieved from <http://npa.ug/wp-content/themes/npatheme/documents/vision2040.pdf>
- Government of Uganda. (2015). *National Development Plan (NDPII) 2015/16 – 2019/20*. Retrieved from <http://npa.ug/wp-content/uploads/NDPII-Final.pdf>
- Government of Uganda. (2017). *Uganda Strategic Program for Climate Resilience (Uganda SPCR)*. Retrieved from https://www.climateinvestmentfunds.org/sites/cif_enc/files/ppcr_20_6_strategic_program_for_climate_resilience_for_uganda_final_2.pdf
- Irish Aid. (2017). *Uganda Climate Action Report For 2016*. Retrieved from <https://www.irishaid.ie/media/irishaid/allwebsitemedia/30whatwedo/climatechange/Uganda-Country-Climate-Action-Reports-2016.pdf>
- Kiggundu, N. (2017). *Water permit systems, policy reforms and implications for equity in Uganda*. Retrieved from http://pegasysinstitute.org/wp-content/uploads/2017/07/Water-Permitting-Uganda-Country-Report-PI_IWMI-March-2017.pdf
- Kristjanson, P., Bernier, Q., Bryan, E., Ringler, C., Meinzen-Dick, R., S., & Ampaire, E. (2015). *Gender and climate change adaptation in Uganda: Insights from Rakai* (Project Note 3). Washington, D.C.: International Food Policy Research Institute (IFPRI). Retrieved from <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/129753>
- Kusambiza, M. (2013). *A case study of gender responsive budgeting in Uganda*. Commonwealth Secretariat. Retrieved from https://consultations.worldbank.org/Data/hub/files/grb_papers_uganda_updf_final.pdf
- Lukwiya, P. (2009). *Effect of climate change on water resources in Uganda*. On the Frontlines of Climate Change Forum. Retrieved from <http://www.climatefrontlines.org/sites/default/files/Effect%20of%20Climate%20change%20on%20Water%20resources%20in%20Uganda.pdf>
- Ministry of Finance, Planning & Economic Development, Government of Uganda (MofPED). (2015). *First Budget Call Circular for the FY 2017/18. Uganda Climate Smart Agriculture Country Program 2015-2025*. Retrieved from http://canafrica.com/wp-content/uploads/2015/08/3-UGANDA-CLIMATE-SMART-AGRICULTURE-PROGRAMME.Final_.pdf
- Ministry of Finance, Planning And Economic Development. (2017). *National Budget Framework Paper FY 2018/19*. Retrieved from <http://csbag.org/wp-content/uploads/2018/01/National-Budget-Framework-Paper-FY-2018-19-FY-2022-23-13.pdf>
- Ministry of Gender, Labour and Social Development (2014, June). *Report of Uganda on the Implementation of the Beijing Platform for Action (1995) and the Outcome of the Twenty Third Special Session of the UN General Assembly (2000)*. Retrieved from https://sustainabledevelopment.un.org/content/documents/13217Uganda_review_Beijing20.pdf
- Ministry of Water and Environment (MWE). *Uganda Water Supply Atlas*. (n.d.). Retrieved from http://www.mwe.go.ug/sites/default/files/library/Atlas%202017_1_Introduction.pdf
- Ministry of Water and Environment, Government of Uganda. (2010). *Water and Sanitation Sub-sector Gender Strategy 2010-2015 (WSGS II)*. Retrieved from <http://extwprlegs1.fao.org/docs/pdf/uga152829.pdf>



- Ministry of Water and Environment. (2015a). *Uganda National Climate Change Policy*. Retrieved from <http://www.mwe.go.ug/sites/default/files/library/National%20Climate%20Change%20Policy%20April%202015%20final.pdf>
- Ministry of Water and Environment, Government of Uganda. (2015b). *Water and Environment Sector Development Plan 2015/16-2019/20*. Retrieved from: <http://npa.ug/wp-content/uploads/2018/01/Water-and-Environment-Sector-Development-Plan-2020new.pdf>
- Ministry of Water and Environment, Government of Uganda. (2016). *Environment and Natural Resources Sub-Sector Gender Mainstreaming Strategy 2016-2021*. Retrieved from <http://www.mwe.go.ug/sites/default/files/library/ENR%20GENDER%20STRATEGY%20%202016%20-2021.pdf>
- Ministry of Water and Environment, Government of Uganda. (2017a). *Gender impact study of the water and sanitation sub sector*. Retrieved from http://www.mwe.go.ug/sites/default/files/library/2017_Gender%20Impact%20Study%20Report%20for%20Water%20and%20Sanitation%20Sub%20Sector.pdf
- Ministry of Water and Environment, Government of Uganda. (2017b, March). *Ministerial Policy Statement*. Retrieved from <http://www.mwe.go.ug/sites/default/files/library/MPS%20FY%202017-2018.pdf>
- Ministry of Water and Environment, Government of Uganda. (2017c). *Uganda Water and Environment Sector Performance Report 2017*. Retrieved from http://envalert.org/wp-content/uploads/2017/09/2017-09-14_SPR-2017.pdf
- Ministry of Water and Environment, Government of Uganda. (2018). *Water and Sanitation Gender Strategy 2018-2022 (WSGS III)*. Retrieved from <http://www.mwe.go.ug/sites/default/files/library/Water%20and%20Sanitation%20Gender%20Strategy.pdf>
- Ministry of Water, Lands and Environment. (1999). *Uganda National Water Policy*. Retrieved from <http://extwprlegs1.fao.org/docs/pdf/uga158331.pdf>
- Mugenyi, C. (2010). Mount Elgon landslides a result of climate change. *Daily Monitor*. Retrieved from <http://www.monitor.co.ug/OpEd/Commentary/689364-872706-3mljrs/index.html>
- Mutagamba, M. (2016). Water gender policy in practice in Uganda. *The Solutions Journal*, 7(6), 38–39. Retrieved from <https://www.thesolutionsjournal.com/article/water-gender-policy-practice-uganda/>
- Nachmany, M., Fankhauser, S., Davidová, J., Kingsmill, N., Landesman, T., Roppongi, H., Schleifer, P., . . . Townshend, T. (2015). Climate change legislation in Uganda (Excerpted from *The 2015 Global Climate Legislation Study: A review of climate change legislation in 99 countries*. Retrieved from <https://www.ugandanetworks.org/Publisher/File.aspx?ID=173198>
- Naiga, R., Penkerb, M., & Hoglc, K. (2017). Women's crucial role in collective operation and maintenance of drinking water infrastructure in rural Uganda. *Society & Natural Resources*, 30(4), 506–520. Retrieved from <http://dx.doi.org/10.1080/08941920.2016.1274460>
- Nakabugo, Z. (2018, March 9). Uganda's population likely to hit 55 million by 2025, gov't worried. *The Observer*. Retrieved from <https://observer.ug/news/headlines/57146-uganda-s-population-likely-to-hit-55-million-in-2025-gov-t-worried.html>



- National Environment Management Authority (NEMA). (n.d.). *Home page*. Retrieved from <http://www.nema.go.ug/>
- Nations Online Project. (n.d.). *Political map of Uganda*. Retrieved from <http://www.nationsonline.org/oneworld/map/uganda-map.htm>
- NDC Partnership. (2017). *NDC Country Outlook UGANDA*. Retrieved from https://ndcpartnership.org/sites/all/themes/ndcp_v2/docs/country-engagement/countries/NCDP_Outlook_Uganda_v3a.pdf
- Nelson, V. (2010). *Climate change and gender: What role for agricultural research among smallholder farmers in Africa?* (CIAT Working Document No. 222). Natural Resources Institute. University of Greenwich, UK. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.704.8525&rep=rep1&type=pdf>
- Nicol, A., & Odinga, W. (2016). IWRM [Integrated Water Resources Management] in Uganda—Progress after decades of implementation. *Water Alternatives*, 9(3):627-643. (Special issue: Flows and Practices: The Politics of Integrated Water Resources Management (IWRM) in southern Africa). Retrieved from <http://www.water-alternatives.org/index.php/alldoc/articles/vol9/v9issue3/326-a9-3-13/file>
- Nsubuga, F.N.W., Namutebi, E.N. & Nsubuga-Ssenfuma, M. (2014). Water resources of Uganda: An assessment and review. *Journal of Water Resource and Protection*, 6, 1297–1315. <http://dx.doi.org/10.4236/jwarp.2014.614120>
- Nyasimi, M., Radeny, M., Mungai, C., & Kamini C. (2016). *Uganda's National Adaptation Programme of Action: Implementation, challenges and emerging lessons*. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Retrieved from <https://ccafs.cgiar.org/publications/uganda%E2%80%99s-national-adaptation-programme-action-implementation-challenges-and-emerging#.WzQSjyBOMUk>
- Office of The Auditor General. (2015). *Gender mainstreaming in Wakiso District Local Government*. Retrieved from <http://www.oag.go.ug/wp-content/uploads/2016/07/OAG-Gender-and-Equality-wakiso.NEW-print.pdf>
- Opio, C. (2012). *Building effective drinking water management policies in rural Africa: Lessons from Northern Uganda* (CIGI Discussion Paper No. 6). Retrieved from <https://www.cigionline.org/sites/default/files/no6.pdf>
- Payne, D., Nakato, M., & Nabalango, C. (2008). Building rain water tanks and building skills: A case study of a women's organization in Uganda. *Rural Society* 18(3).
- Pommells, M., Schuster-Wallace, C., Watt, S., & Mulawa, Z. (2018). Gender violence as a water, sanitation, and hygiene risk: Uncovering violence against women and girls as it pertains to poor WaSH access. *Violence Against Women*. <https://doi.org/10.1177/1077801218754410>
- Preller, C. (2010). *Climate change actors' landscape of Uganda*. Reform of the Urban Water and Sanitation Sector Programme (RUWASS). Retrieved from <http://eebea.org/sites/default/files/documents/s20423en.pdf>
- Republic of Uganda. (2006, February 15). Republic of Uganda Constitution. Retrieved from <http://www.wipo.int/edocs/lexdocs/laws/en/ug/ug002en.pdf>
- Rogers, K. (2012). *Water as a development constraint: The case of Lwebitakuli Subcounty, Sembabule District, Uganda*. University of Agder. [Master's Thesis]. Retrieved from <https://brage.bibsys.no/xmlui/bitstream/handle/11250/135247/oppgave%20Rogers%20Kaliisa.pdf?sequence=1>



- Tumushabe, G., Muhumuza, T., Natamba, E., Bird, N., Welham, B., & Jones, L. (2013). *Uganda National Climate Change Finance Analysis*. Retrieved from http://www.acode-u.org/Files/Publications/Climate_Change_Financing.pdf
- Uganda Bureau of Statistics. (2013a). *Compendium of concepts and definitions on gender statistics*. Retrieved from <http://www.ubos.org/onlinefiles/uploads/ubos/gender/Compendium%20of%20Concepts%20and%20Definitions%20on%20Gender%20Statistics.pdf>
- Uganda Bureau of Statistics. (2013b). *Uganda facts and figures on gender*. Retrieved from https://ubos.org/wp-content/uploads/publications/04_2018Uganda_Facts_and_Figures_on_Gender_2013.pdf
- Uganda Bureau of Statistics. (2018). *National Mid Year Population Projections by Single Age (2015-2050)*. Retrieved from <https://www.ubos.org/explore-statistics/statistical-datasets/6133>
- Uganda Water & Sanitation NGO Network. (2014). *Practitioner's Handbook for IWRM in Uganda*. Final Draft. Retrieved from <http://www.uwasnet.org/Elgg/file/download/7220>
- UN-DESA. (1992). Report of the United Nations Conference on Environment and Development. Retrieved from <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>
- UN-WATER. (2005). *Uganda National Water Development Report*. Retrieved from <http://unesdoc.unesco.org/images/0014/001467/146760e.pdf>
- United Nations Development Programme (UNDP). (2015). *Uganda Country Gender Assessment*. Retrieved from http://www.ug.undp.org/content/uganda/en/home/library/womens_empowerment/UGANDACOUNTRYGENDERASSESSMENT.html
- UNDP Uganda. (2016). Gender Equality Strategy, 2014-2017, *Investing in gender equality for Uganda's socio-economic transformation*. Retrieved from http://www.ug.undp.org/content/uganda/en/home/library/womens_empowerment/UNDPUGandaGenderEqualityStrategy2014-2017.html
- United Nations Climate Change. (n.d.). *Uganda*. Retrieved from http://unfccc.int/tools_xml/country_UG.html
- Water Policy Component. (2006). *Baseline and needs assessment of national water policies of the Nile Basin countries: A regional synthesis*. Retrieved from http://gis.nacse.org/rewab/arabic/docs/Baseline_Needs_Assessment_Egypt.pdf
- Water Supply and Sanitation Collaborative Council (WSSCC). (2006). *For her it's the big issue – Putting women at the centre of water supply, sanitation and hygiene – Evidence report*. Retrieved from <https://www.wsscc.org/wp-content/uploads/2016/04/for-her-its-the-big-issue-putting-women-at-the-centre-of-water-supply-sanitation-and-hygiene-wash-evidence-report.pdf>
- World Bank. (2011). *Uganda water assistance strategy*. Retrieved from <http://documents.worldbank.org/curated/en/868541468110673491/Uganda-Water-assistance-strategy>
- World Meteorological Organization (WMO). (1992). *The Dublin Statement on Water and Sustainable Development*. Retrieved from <http://www.wmo.int/pages/prog/hwrrp/documents/english/icwedece.html>

©2018 The International Institute for Sustainable Development
Published by the International Institute for Sustainable Development.

Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700
Website: www.iisd.org
Twitter: @IISD_news



iisd.org