Gender, Power and Local Water Governance in Rural Uganda

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By

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Summary

Gender inequality is one of the biggest challenges to equitable and sustainable natural resource and water governance in developing communities. This thesis investigates the gendered politics of access to water and participation in water governance, using a case study of Makondo Parish in rural Uganda. It empirically explores the micro political and institutional mechanisms that gender access and management of water resources in a rural context in Uganda.

The study draws on a theoretical framework that includes: power and difference, particularly the works of Michel Foucault; the politics of access to resources; and theories of gender and participatory democracy and governance. A 'qualitative-dominant' mixed method approach was used, in which a cross-sectional survey, focus group discussions, in-depth interviews, participant observation and community meetings were conducted in the study area. It is argued that whereas there are technical and administrative flaws in water governance at all levels in Makondo Parish, gender divisions and inequalities determine men and women's access to water, water collection and participation in local water governance.

The study contends that children and women are negatively impacted by the current modes of access to water, such as water technologies; formal institutions; knowledge and information; and payments or in-kind contributions. For example, despite the existence of "improved" and perhaps safer water sources in the study area, children and women mainly use "unimproved" water sources due to closer proximity, 'reliability' of source, and it not being necessary to pay repair or maintenance fees to use them, among other reasons. Men's reluctance to pay repair fees and women's inadequate access to money, a major determinant of functionality of "improved" water sources, increases the troubles that women and children face in accessing water. The study further confirms that the burden of collecting water on a daily basis falls primarily on children and women, who move long distances to fetch water, and/or queue for long periods at "improved" water sources, activities that consume their time. Women and children's health and safety are also unevenly impacted by this burden. Health problems arise from the strain of carrying water, from accidents while negotiating hilly and uneven roads and paths, and in addition children and women's safety can be compromised as deaths occur from drowning at 'unimproved' sources. Both women and children can find

themselves vulnerable to verbal and physical assault as gendered social interaction unfolds around water processes.

With regard to participation in water governance, this study exposes that despite their recognised roles as water managers at the household-level and national objectives to include women in community management processes, they are less involved in the governance of water than men and therefore have little influence on how water is managed. Women are not *effectively* represented in water resource management in Makondo parish, and although they attend water meetings more than men (largely due to their household water management role and their higher enthusiasm compared to men's), women's physical presence is not enough for them to voice their water needs and concerns in local water spaces. Women's voices and choices are undermined in local water decision-making processes due to patriarchal norms and stereotypes that give men more power and opportunities and give women low self-belief in their abilities. More transformative, gender-equitable, and inclusive approaches are needed to bring about sustainable water governance in rural developing communities.

Dedication

To my heritage from the Lord, Lynette B. Bagonza and Laura K. Bagonza

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List of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
BH	Bore-hole
CAP-NET	International Network for Capacity Building in Integrated Water Resources Management
CBMS	Community Based Management System
CDO	Community Development Officer
CHW	Community Health Worker
CREAM	Consultancy of Rural Enterprise Activities Management
CSOs	Civil Society Organizations
DCU	Dublin City University
DMTC	Development Management and Training Consultants
DRA	Demand Responsive Approach
DWD	Directorate of Water Development
DWO	District Water Office
DWSCC	District Water and Sanitation Coordination Committee
DWSDCG	District Water and Sanitation Development Conditional Grant
FG	Focus Group
FGD	Focus Group Discussion
FHH	Female-headed household
GAD	Gender and Development
GFS	Gravitational Flow Scheme
GFSA	Gravitational Flow Scheme Attendant
GPS	Global Positioning System
GWP	Global Water Partnership
GOU	Government of Uganda
GWA	Gender and Water Alliance
HIV	Human Immune Deficiency Syndrome
HPM	Hand Pump Mechanic
IDIs	In-depth Interviews
JICA	Japan International Cooperation Agency
JMP	Joint Monitoring Programme of WHO and UNICEF
KI	Key Informant
KII	Key Informant Interview
LC	Local Council
MDG	Millennium Development Goals
MGLSD	Ministry of Gender, Labour and Social Development
MFPED	Ministry of Finance, Planning and Economic Development
MHH	Male-headed household
MMM	Medical Missionaries of Mary
MS	Microsoft
MWE	Ministry of Water and Environment
NCST	National Council for Science and Technology, Uganda
NDP	National Development Plan
NEMA	National Environment Management Authority
NETWAS	Network for Water and Sanitation
NFOMRWS	National Framework for Operation and Maintenance of Rural Water Supplies
NGO	Non-governmental Organisation

NUIM	National University of Ireland, Maynooth
NWP	National Water Policy
O&M	Operation and Maintenance
PEAP	Poverty Eradication Action Plan
PO	Participant Observation
PS	Protected Spring
RCSI	Royal College of Surgeons in Ireland
RWH	Rain Water Harvesting
RWSN	Rural Water Supply Network
SDC	Swiss Agency for Development and Cooperation
SHA	Sub County Health Assistant
SNV	Netherlands Development Organisation
SOER	State of Environment Report
SPSS	Special Package for Social Scientists
SRES	Social Research Ethics Sub-Committee of NUI Maynooth
SSA	Sub-Saharan Africa
SW	Shallow well
SWGS	School of Women and Gender Studies, Makerere University
TSU	Technical Service Unit
UBOS	Uganda National Bureau of Statistics
UGX	Uganda Shillings
UN	United Nations
UNCST	Uganda National Council for Science and Technology
UNDP	United Nations Development Programme
UNICEF	United Nations International Children's Emergency Fund
UWASNET	Uganda Water and Sanitation Network
WATSAN	Water and Sanitation
WBCSD	World Business Council for Sustainable Development
WHIRL	Water, Households and Rural Livelihoods
WHO	World Health Organisation
WID	Women in Development
WIL	Water Is Life: *Amazzi Bulamu* Project
WPC	Water Policy Committee
WSC	Water and Sanitation Committee
WUA	Water User Association
WUC	Water User Committee
WUG	Water User Group
WWAP	World Water Assessment Programme
$\chi 2$	Chi-Square
YODEO	Youth Development Organisation

Chapter One: Water Governance and Gender in Context

1 Introduction

1.1 Background

Water is arguably the most important environmental resource which if used and managed sustainably provides numerous ecological, health and social benefits (WHO 2003;UNDP 2006;Armstrong 2009). It sustains the life of plants, animals and humans, and is essential for proper hygiene, growing of food, keeping animals, rest, exercise and relaxation (Global Water Partnership [GWP] 2000; Maharaj 2003; World Business Council for Sustainable Development [WBCSD] 2009; Water, Households and Rural Livelihoods [WHIRL] 2001). Water is also of crucial social and cultural significance in society: it is a symbol of culture, identity and kinship among many communities in Africa, South America, Asia and other parts of the developing world (UN-Water 2005b; Van Der Zaag 2006). In Africa, water plays a role in constructing social and religious identities that have led to new perspectives in archaeology, history, development studies and anthropology (Fortes 1969; Badoun 2006). Because of its vital environmental, economic and social values to society, the right to water was adopted by the UN Human Rights Council under General Comment Number 15, and water is now recognised as a fundamental human right (WHO 2003; Zetland 2010). As provided by the UN Human Rights Council (2010), the human right to safe drinking water and sanitation is derived from the right to an adequate standard of living, a high standard of physical and mental health, and a right to life and human dignity. Thus, water is indispensable in achieving a better quality of life and sustainable development.

Unfortunately, many people in the developing world still find it difficult to get water. Recent estimates suggest that the Millennium Development Goals (MDGs) target on access to safe drinking water has been reached with 89% of the global population now using “improved” drinking water sources, but 780 million people still do not have access to safe water, and 40% of these live in Sub-Saharan Africa (SSA) (WHO and UNICEF 2012). The gap in access to water between rural and urban areas is huge, with people in rural areas facing greater challenges in accessing clean drinking water. In 2008, an urban dweller in SSA was 1.8 times more likely to use an “improved” drinking water source than a person living in a rural area, while presently, the

number of people in rural areas using "unimproved" water sources is five times greater than in urban areas, including at country level in most developing countries. "Unimproved" or "not improved" water sources are defined by WHO and UNICEF's Joint Monitoring Programme (JMP) as those that, by nature of their construction or through active intervention are not protected from outside contamination, especially faecal matter, and examples include unprotected springs; unprotected dug wells and surface water (WHO and UNICEF 2000:4). It is also in rural areas that distances to water sources are long, and women and girls spend a lot of time and energy collecting water compared to men and boys (WHO and UNICEF 2012:6-12, 31). This scenario is a threat to the human race and the attainment of the Millennium Development Goals [MDGs], particularly MDGs 3 and 7 (United Nations [UN] 2000, 2011; WHO and UNICEF 2000:19; WHO and UNICEF 2012). The lack of access to safe drinking water, combined with inadequate sanitation and poor hygiene are responsible for a rise in poverty and water-related diseases, mainly diarrhoeal (UNDP 2006).

Whereas water is many times regarded as a physical environmental resource, access to it is determined by political, economic and complex social factors, such as gendered cultural values, norms and practices (Rached, Rathgeber, and Brooks 1996; Cleaver *et al.* 2005; Davidson and Stratford 2007). Inadequate access to safe water is mainly caused by the inter-related aspects of poor governance, poverty and social problems, including gender inequalities (Shiva 2000; International Network for Capacity Building in Integrated Water Resources Management [CAP-NET] and Gender and Water Alliance [GWA] 2006; Singh 2006; UNDP 2006; Harris 2009). The concept of 'water governance' has penetrated water policy and development in the developing world and is now a recognised key determinant of sustainable water resource management (Rogers and Hall 2003; Cleaver and Franks 2007; Plummer and Slaymaker 2007). Water governance is defined as *"the range of political, social, economic and administrative systems that are in place to develop and manage water resources and the delivery of water services at different levels of society"* (Rogers and Hall 2003:7). These multifaceted and problematic 'systems' and social institutions (described as 'mechanisms' by water and natural resource theorists), such as formal and informal institutions, water rights and payment arrangements determine how communities access water at macro, meso and micro levels (Franks and Cleaver 2007:292), and are characterised by social exclusion and unequal power relationships. Indeed,

just like access to water, social beliefs and norms mediate water governance (e.g., McDonald and Kay 1988; Franks and Cleaver 2007:295), impacting on men and women differently (Cleaver *et al.* 2005; GWA 2006; Singh 2008). This occurs through for example prohibitive taboos and behavioural expectations that tend to favour men (e.g., Seeley 2000; Tukai 2005; Bennett, Dávila-Poblete and Rico 2008; Singh 2008), hence denying poor men, women and disadvantaged groups access to water and limited control over decision-making processes (Boelens and Hoogendam 2002; Thaxton 2003; UN 2003; GWA 2006; Raby 2006).

The participation of various actors, particularly poor women and men has been hailed as a key pathway to achieving more democratic, efficient, and sustainable water governance (Rogers and Hall 2003; UNDP 2006; Plummer and Slaymaker 2007). Global water *entente*, such as the 1977 United Nations Water Conference at Mar del Plata, a milestone in the history of water development (Biswas 2004), called for the recognition of participation in water planning and management, and the consideration of water management from a holistic and comprehensive basis. Principle 2 of the International Conference on Water and the Environment (1992) states that *"water development and management should be based on a participatory approach, involving users, planners and policy makers at all levels"*. Similarly, Principle 10 of the 1992 United Nations Conference on the Human Environment (also known as the Rio Declaration on the Environment and Development) stipulates that environmental issues are best handled with the participation of all concerned citizens at the relevant level, and calls for every individual's access to information and their opportunity to participate in decision-making processes. These principles underscore the need for actors to work together in the delivery of water services at all levels of water governance.

On gender equality in participation, Principle 20 of the Rio Declaration states that women have a vital role in environmental management and development, and that their full participation is essential for sustainable development to be achieved. Chapter 18 of the same declaration provides for participation, capacity building and mobilisation of women as decision-makers and managers of water resources. The Ministerial Declaration of the International Conference on Freshwater in Bonn (2001) further states that:

> *Water resources management should be based on a participatory approach. Both women and men should be involved and have an equal voice in managing the sustainable use of water resources and sharing the benefits. The role of women in water-related areas needs to be strengthened and their participation broadened.*

These principles are also enshrined in the Johannesburg Plan of Implementation of the 2002 World Summit on Sustainable Development, and the resolutions of the 'Water for Life' decade, 2005-2015 (UN-Water 2005b; UN 2011). Voice, interests and benefits are some of the commonly gendered outcomes of water governance that crucially shape women and men's abilities in decision-making. Despite the fact that several international commitments enjoin states to 'engender' participation in water governance, addressing the gendered politics of water governance at local levels remains a challenge, especially aspects of representation and voice of underprivileged men, women and other groups in Africa or other parts of the developing world (UN 2004:4).

Away from international commitments, it is known that addressing gender improves the efficiency of water use, the social benefits that accrue and the sustainable management of water resources (e.g., Green and Baden 1994; Maharaj 2003; CAP-NET and GWA 2006; WaterAid 2009). However, as already noted, gender differences in roles or work, access and power in water management continue to exist, especially in rural developing communities (e.g., Prokopy 2004; Coles and Wallace 2005; Schulman 2008; Singh 2008; WHO 2012:21), where responsibilities for drinking-water and sanitation services have been devolved to the local level More still, the decentralised governance of water resources seems to be a men's territory, as men dominate the professional and administrative positions in water at different levels. For example, statistics from developing countries indicate that in the staffing for both sanitation and drinking water, women make up less than 10% of the professional or managerial staff (WHO 2012:40). Water governance in these countries is also largely non-responsive to the needs and concerns of women, whose roles as the primary providers of water in rural communities, and social privileges, such as participation in decision-making processes are not adequately recognised (e.g., Meinzen-Dick and Margreet 1998; Ray 2007; Singh 2008).

In Uganda, the situation is not much different. With regard to access to water in rural communities, many of which rely on both "unimproved" and "improved" water sources, women and children, the main water fetchers are most burdened. Since cultural norms and stereotypes exempt men from water collection, women and children move long distances (ranging from half a kilometre to 5km or more) to collect water using heavy containers (e.g., Rudaheranwa *et al.* 2004; Sugita 2006; UBOS 2010b) and thus suffer from health complications such as fatigue, curved spines and pelvic deformations (e.g., Danert and Motts 2009). Women and children in rural Uganda also spend several minutes or hours waiting for water or queuing at water sources, an activity that puts their lives at a risk of gender-based violence (Ademun 2009; GOU 2011a). And when "improved" water sources breakdown, women and children tend to access water from unsafe or open water sources due to the high costs of maintaining the water sources or failure to pay operation and maintenance (O&M) fees, *inter-alia*, putting their lives and those of their household members at a risk of water borne diseases (e.g., Kanyesigye *et al.* 2004; CREAM 2009; Nimanya *et al.* 2011). With regard to participation in water governance, Uganda's legal and policy framework provides for local-level institutions such as Water User Committees (WUCs) responsible for the O&M of every "improved" water source, with equal representation of men and women (e.g., the 1995 Water Statute and the National Framework for the Operation and Maintenance of Rural Water Supplies [NFOMRWS], 2011). However, women are not adequately represented on WUCs as most of the key positions are held by men and their participation and voice in water meetings is minimal, largely due to traditional norms that exclude or undermine women (e.g., DMTC 2009; GOU 2009b; Asingwire 2011; Nimanya *et al.* 2011).

Despite the available literature on gender and water governance, few studies have examined how gender impacts on access to water and participation in decision-making processes at household and community or micro-political levels, particularly in rural SSA and Uganda in particular, as illustrated further in the next section. The aim here therefore is to address these gaps using a case study of a rural area in Uganda.

1.2 Problem Statement

There is a plethora of scholarly and development literature on gender and water governance in poor communities. In most of these communities, traditional norms and practices accord women the primary responsibility for water management at the household level, which has increased their drudgery (e.g., Benedict 1998; Upadhyay 2005; UNDP 2006; Ray 2007; Bennett, *et al.* 2008).

Studies on access to water, which is mainly mediated by mechanisms such as traditional (or informal) and formal institutions (Franks and Cleaver 2007; Plummer and Slaymaker 2007; Zetland 2010) confirm that women and disadvantaged groups have limited access, are usually excluded from water management processes, and that their rights to participate are limited and their voices and interests often ignored (e.g., Resurreccion, Real and Pantana, 2004; Coles and Wallace 2005; GWA 2006:161-163; Singh 2008; Cleaver 2010). Many of the formal institutions follow the 'neo-liberal' principles[1] (Meinzen-Dick 2007; Ahlers and Zwarteveen 2009), whose ability to ensure gender equality in water management has recently come under scrutiny (e.g., Cleaver 2004). It is also known that women's inadequate participation in local natural resource or water governance is caused by social structural conditions such as patriarchal norms, beliefs, perceptions and traditions (Thaxton 2003; CAP-NET and GWA 2006; Singh 2006; Nuggehalli and Prokopy 2009) and micro level dynamics, one being 'individual factors' such as low levels of education, and lack of confidence and leadership experience (e.g., Agarwal 2001; GWA 2006; Singh, 2008:927).

In spite of all these studies, there is inadequate empirical evidence, especially in SSA and Uganda in particular on the gendered politics of water governance in rural communities. For example, the gender dynamics of other mechanisms of access to water, such as the nature of water technologies; operation and maintenance (O&M) arrangements; formal institutions or local governments and Water User Committees (WUCs), all of which are key elements of water governance (Harris 2009; Seager 2010) are less understood. Also, most studies on water collection seem to focus on distance to and from the water sources (e.g., Crow 2001; Thompson

[1] outlined in international commitments e.g., Dublin Principles and Rio Declaration highlighted in the previous section

et al. 2001) and time spent (e.g., Roy and Crow 2004; Bennett *et al.* 2008; Arku 2010), ignoring other social processes and conditions that vitally determine the troubles that women and children undergo while fetching water. Furthermore, there is little literature on gender differences in participation, principally representation and voice *vis-à-vis* men and women's needs and interests and the incentives and disincentives in all water-related decision-making processes in particular socio-political contexts (e.g., Harris 2009; Cleaver and Hamada 2010).

Hence, this study sought to explore the gender differences in access to water and participation in the governance of water resources in rural Uganda.

1.3 Purpose of the Study

1.3.1 Overall Objective

In the previous section, we have seen that there is scanty empirical evidence on the gendered politics of water governance, particularly the social determinants of access to water and power relations that characterise participation in water management in rural communities in SSA. The task of this research is to uncover these gender dynamics, using a case study of a rural area in Uganda. The overall aim is to assess the social relations and rights that determine men and women's access to water; examine water collection as a process by looking further than the technical suppositions of water technologies, distance and time; and to explore the transformative potential of participation in the governance of water at a local level. Thus, the overall objective of this study is to assess the gender differences in access and participation in the governance of water resources in Makondo Parish, Lwengo District, Uganda.

1.3.2 Specific Objectives

Following from the overall objectives discussed in Sub-section 1.3.1, this study set out to:

(i) Explore the gender differences in access to water resources.

(ii) Examine the gender differences in water collection.

(iii) Critically analyse the gender dynamics in participation in the governance of water resources.

1.4 Research Questions

1.4.1 Overall Question

What are the gender differences in access and participation in the governance of water?

1.4.2 Specific questions

(i) What social institutions and processes (or mechanisms) determine how men, women, boys, girls and disadvantaged groups access water resources?

(ii) What are the gender differences in these institutions or mechanisms and how do they affect men and women's access to water?

(iv) What are the gender differences in water collection and how do they impact on men, women, girls' and boys' access to water?

(v) How are men and women included in local water decision-making processes? Are men and women effectively represented? How do the gender groups voice their interests, needs and concerns in the decision-making processes? Whose discourses count?

(vi) What options can transform gender relations in water governance in Makondo Parish?

1.5 Scope

1.5.1 Thematic scope

As noted in Section 1.1, water governance is a complex concept. This study focussed on the gender dynamics in access and participation in the management of water resources in a rural community. Investigations on access covered key aspects such as water technologies; formal institutions; payment arrangements; and water collection. Under water collection, issues of distance, time and other social, environmental and health-related determinants that emerged from the study were addresses. As for participatory water governance, the issues that were addressed were: inclusion in all planning and implementation processes; representation and voice; and discourses in local decision making processes. Where necessary, reference was made to national or local water policies as illustrated in Chapters Five to Seven.

1.5.2 Geographical Scope

This study focussed on Makondo Parish as a case study rural developing community. The Parish has 15 villages, all of which were sampled in the household survey; only four villages were purposively selected as 'case studies within a case study' for the more qualitative investigations, as explained in Chapter Four. The other study participants included individuals in administrative and technical positions at Village, Parish, Sub County, District, and National levels.

1.6 Contribution of the Study to Sociology and Development

This study highlights the importance of gender as a key element of social difference in natural resource governance, particularly water, a resource that continues to elude many poor communities (Thaxton 2003; GWA 2006; Bennett *et al.* 2008; Singh 2008).

Drawing on Foucault's notions of power and theories of access to resources, and gender and participatory governance, this study examined the gendered politics of local water governance, using a case study of Makondo Parish in rural Uganda. The study therefore shows, from a post-structural perspective, how gender differences resulting from social norms, beliefs or values and political and administrative failures propagate injustices against women and children in water governance. Traditional norms, values and stereotypes assign roles and determine who accesses water and who participates in decision-making processes.

The study therefore contributes to the better understanding of the gendered politics of water governance, especially structural and socio-political inequalities, or the place of men, women, boys and girls children in a particular rural developing context. The study also suggests some locally relevant and evidence-based implications on equitable and sustainable water resource governance in rural communities. As part of the 'Water Is Life*: Amazzi Bulamu'* Project (WIL)[2], this study is one of the eight multidisciplinary projects that support sustainable water resource management in rural Uganda. The study is therefore of great relevance to water and environment policy makers, public health officers, development partners, Civil Society organisations (CSOs), academic researchers and other stakeholders in the water sector in Uganda, Africa and other parts of the developing world.

[2] spearheaded by the Dundalk Institute of Technology and higher education institutions in Uganda and Ireland, including NUI Maynooth

1.7 Organisation of the Chapters

Chapter Two reviews literature on gender and water governance. It begins by explaining the key terms, and elucidating how these terms are used. The chapter goes ahead to illuminate the links between gender and water governance, its structures, social institutions or 'mechanisms', and processes, including participation. The available studies on gender and access to water and participation in water resource management are examined, highlighting the 'missing links' particularly in the context of SSA. The last section of the chapter focuses on the local context, that is rural Uganda, principally the legal and policy frameworks, institutions and literature on gender and water governance.

Chapter Three provides the theoretical perspectives that guided this study. First, it largely draws on theorists such as Henri Lefebvre, Andrea Cornwall (2002), John Gaventa (2004b) and Joan Acker (1992) to explore social spaces, institutional structures and processes, highlighting how they are laced with politics and power. This is followed by a sociological and gendered analysis of power, using the works of Steven Lukes and Michel Foucault. The influential contributions of the philosophical work of Michel Foucault are also highlighted, particularly his ideas of agonistic power, panopticonism or 'disciplinary power' and the normalising gaze, and the 'docile bodies' thesis, all of which were used to analyse the gendered politics of local water governance. Access to water is then hypothesized using social or relational (and rights-based) perspectives advanced by Jesse Ribot and Nancy Peluso (2003), which emphasize the ability of individuals (or women and men) to use their bundles and webs of powers to gain, maintain, and control access to natural resources. I also draw on Tom Franks and Frances Cleaver (2007)'s water governance framework to further elucidate the mechanisms of access to water. This is then followed by an exploration of the forms of participation, drawing on the concepts of representation, voice, needs and interests as espoused by transformative models and ideals of democracy and decision-making. It is through these theories that the key social institutions, structures and processes that gender access and participation in water governance are identified.

Chapter Four explores the methodology employed in this study. It describes the mixed-method approach that was used; the modes of inquiry, that is survey, focus group discussions (FGDs), in-

depth interviews (IDIs) and participant observation (PO); the study area and why it was selected; study population (including a description of the socio-demographic characteristics of the survey respondents in more detail); sampling procedures; data analysis methods, and the procedural and micro-ethical issues that were taken into account. The chapter also explains how gender (and feminist) analysis approaches were incorporated in the mixed-method approach so as to solicit the collaboration and voices of women as a traditionally underprivileged group. It also shows how the crucial aspects of reflexivity, validity and reliability were taken into account. The chapter ends by demonstrating the limitations that were encountered in the study and how they were overcome.

Chapter Five reveals the gender dynamics in access to water in the study area. It considers the social or relational, and rights-based mechanisms of access that shaped how various actors, particularly men, women, boys and girls benefitted from water. The main social mechanisms of access to water discussed include: water technologies; formal institutions; knowledge and information; payments or in-kind contributions; physical labour; and the more encompassing gendered identities and social relations. The legal rights-based modes of access that emerged from the study, mainly local entitlements and local property rights and illegal modes such as overt force and stealth behaviour are also considered. The interrelationships between the social and rights-based mechanisms of access to water identified in Makondo Parish are also expounded, showing how they affect men, women and children.

Chapter Six is on water collection, a fundamental component and determinant of access to water. Viewing water collection as a socially constructed and laborious activity, the chapter broadly explores gender roles and responsibilities in water collection. The chapter examines the gender dimensions of distance and time as the 'mainstream' development burdens of water fetching. The Chapter then explicates other critical social processes involved in obtaining water, such as daily trips; queuing; transportation and carrying of water and the weight of containers used; and health complications related to carrying water. The risks of verbal and physical assault or attacks from humans and animals while collecting water are also explained. The chapter concludes by highlighting the importance of the under-researched social, environmental and health-related conditions and processes that children and women undergo when collecting water.

Chapter Seven explores the participation of men and women in the governance of water resources. It primarily looks at representation, an under-researched area in development and water governance in particular and assesses other potentially transformative practices in local water spaces. The chapter starts by analysing the main water agents in Makondo Parish with a gender lens, before then moving on to the involvement of men and women in all the processes of safe water provision and management, such as pre-construction, choice and siting of water technologies and establishment of the water points. The chapter then considers membership in local water institutions and the presence of men and women in water meetings, as well as the power dynamics of agenda setting. The key issues of discourses in local water spaces, voice and influence over final decisions made and their implementation and how they differently impact on men and women are discussed. The chapter also highlights the influence of gender-based cultural norms, stereotypes and practices in all these processes, and how they disadvantage women.

Chapter Eight provides the major findings and conclusions of this study. The findings are presented thematically, covering the key themes that the study set out to interrogate, that is, access to water, water collection and participation in water governance. The chapter explains how the mechanisms of access to water and water collection in Makondo Parish are gendered to the disadvantage of women. It is also noted that the social structures and institutions provide insufficient spaces for more transformative participation in local water governance, especially for women. The chapter concludes by summarising the implications of the study.

Chapter Two: Unpacking Gender and Water Governance

2.1 Introduction

This chapter reviews literature on gender and water governance globally and in Uganda in particular. It starts by identifying the major concepts in the subject area and defining their use in this study. The chapter then examines the links between gender and water governance, emphasising the importance of gender equity as a sub-principle of 'responsiveness'. This is followed by an exploration of the gender issues in water governance, covering two main facets: access to water and participation in decision-making processes. Under access, reference is made to the development-based description that largely considers "improved" water technologies, water amounts used and distance; and a more sociological classification that recognises people's abilities or powers. These are examined alongside the 'mechanisms' of access such as water technologies; formal institutions; informal institutions and the process of water collection. The chapter also explores participation as a key element of democracy and devolution of water management, before then focusing on the typologies of participation, particularly two key modes with a potential to change institutional, social and gender relations — representative and transformative participation. The last section of the chapter then examines the legal, policy and institutional frameworks for rural water governance in Uganda.

2.2 Considering Gender, Governance and Water Governance (Key Terms)

In this section, I identify the major concepts used in this study area and explain their use. The key concepts are gender; water resources; governance; water governance; water management; and participation.

Perhaps the first key concept is 'gender', a term that has been described by various social, development and feminist theorists. According to Ann Oakley (1972), who also introduced the term 'gender' to sociology with her influential work: *Sex, Gender and Society*, gender refers to *"the parallel and socially unequal division into femininity and masculinity"*. According to Oakley, femininity and masculinity are the socio-culturally distinctive and 'appropriate' ways of acting and feeling associated with being a woman or a man respectively. From this, it is clear

that that gender is thus a social construct, created by the social environment - it is not biological or 'natural' (Holmes 2007; Oakley and Mitchell 1997). Following the shift in theoretical discourse from the Women in Development (WID) framework that emerged in the 1970's to Gender and Development (GAD), gender is now viewed as a relational concept, emphasising power relations between men and women. Therefore, gender theorists now describe gender taking into account the differences between men and women that are socially constructed, changeable over time and have wide variations within and between cultures (e.g., Butler 1993; Moser 1993)**.** These differences include, *inter-alia*, statuses, roles or functions, behaviours and aptitudes of men and women, which are productive, reproductive or community-related; their opportunities; access to and control over resources and benefits, and their relative power or relations in society (Connell 1987; Kabeer 2005; Moser 1993; Radtke and Stam 1994b). In Uganda, gender is defined as *"the different roles, rights, responsibilities, attributes, opportunities, privileges, status, access to and control over resources and benefits between men and women, boys and girls in a given society"* (Government of Uganda [GOU] 2007a:31).

With regard to this study, gender was used to describe the different socio-cultural roles and positions of men, women, youths (boys and girls aged 18-24), and children (boys and girls aged 5-17). In particular, the differential access to and control over water resources, vulnerabilities in water collection, and decision-making power and opportunities in local water spaces by these groups were taken into account. As discussed in Chapters Five to Seven, the social attributes, roles, opportunities, status and the relationships between women, men, girls and boys in access to water (resources) and participation in water governance were socially constructed and context-specific.

This brings us to the concept of water resources. First, the term 'resource' is generally used to mean anything that has value or produces benefits such as meeting needs or wants and contributing to improved well being of humans (Miller and Spoolman 2011). Water resources provide various benefits, for instance domestic[3] use (cooking, cleaning and other household tasks); production (in agriculture, for watering and growing crops and rearing animals, industries for processing materials, energy etc); recreation; and 'social values', e.g., it shapes culture,

[3] Household use accounts for eight percent of water use worldwide (WBCSD 2009)

identity and social norms in communities, for instance nomadic communities in Africa (Van Der Zaag 2006:9).

Despite Miller and Spoolman's definition, the meaning of resources within debates on governance (and perhaps sociology) is more akin to their capacity to confer power or authority on individuals. In their piece, *Water Governance and Poverty: A Framework for Analysis*, Tom Franks and Frances Cleaver draw on Anthony Giddens' structuration theory (particularly his notions of 'allocative' and 'authoritative' resources) to opine that water resources are *"water and other water related infrastructure that is needed to meet the demands of users"* (2007:293-294). Infrastructure here refers to the means by which water is conveyed from the resource to users and returned. Therefore, water itself, its natural resources and infrastructure are 'allocative' resources which occur in a natural state, while technology is a 'human-made' resource or physical structure, such as hand pumps as discovered in Makondo Parish. Franks and Cleaver also describe 'non-material' resources as the rules and practices that determine how water is used or accessed, and that these 'rules' are set by institutions; social resources (or structures); and rights and entitlements. The authors further suggest that institutions provide the organisational settings for water delivery or the commonly accepted rules, practices and norms, which occur at macro, meso and micro levels. Social resources are the social structures and power relationships, such as intra-household power relations, micro-level formal[4] and informal institutions, and gender or caste differences that occur in a socio-political context. Rights and entitlements include water or land rights and obligations which may be culturally determined and are mediated through institutions (Cleaver *et al*. 2005; GWA 2006; Plummer and Slaymaker 2007).

Hence, it is clear that water resources are political; they are laced with unequal power relationships, including gender relations. In this study, the term water resources is used to refer to water itself; the various "unimproved" and "improved" water sources; rules, norms and practices; and associated formal and informal institutions that determine access and governance of water.

As a term, 'governance' is not new; it a subjective and contested concept used differently and in several contexts. In his work, *Classics of Political and Moral Philosophy*, Steven Cahn notes that

[4] such as WUCs in Makondo Parish, see Chapter Five, Sub-section 5.3.2

the term governance dates back to the 17th and 18th centuries, and that it was first used in a metaphorical sense by Plato (Cahn 2002). Discussing the theoretical underpinnings of governance, Gerry Stoker suggests that governance had its theoretical roots in fields like institutional economics, development studies, political science and Foucauldian-inspired theory. Others argue that governance arose from the term 'government' and was a result of the recognition of the changing role of government, or new method by which society is governed (e.g., Rhodes 1996:652-653; Gaventa 2004a). This new method is characterised by governments not working in isolation, but making decisions, choices and tradeoffs with other 'non-state' stakeholders, actors or agents in society (Rhodes 1996). Franks and Cleaver rightly sum governance up as *"how governments, the public and private sectors, civil society, citizens groups and individual citizens forge networks and linkages to provide new ways for society to order itself and manage its affairs"* (2007:291). Crucially, this study draws on these definitions but in a more gender-specific manner, as it categorises governance actors as women, men, boys and girls, with differing social needs, interests and opportunities in accessing water and participating in water governance.

Just like governance, the concept of water governance is still evolving, with calls for continued work to improve its comprehension, given its rather intricate forms and contexts (Weiss 2000; UN 2003; Cleaver and Franks 2007). Perhaps the most authoritative definition of water governance is provided by Peter Rogers and Alan Hall, following their prominent work, *Effective Water Governance*. Rogers and Hall define water governance as:

> *The range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services at different levels of society.*
>
> (2003:16)

According to Rogers and Hall, the 'systems' include policies, institutional frameworks and their relationships that are important for water development and management, and add that water institutions should be 'socially accepted'. These authors also recognise decentralisation, institutional reforms and to a smaller extent, gender, as important elements of effective water governance (Rogers and Hall 2003:38). Building on Rogers and Hall's work, Tom Franks and Frances Cleaver propose a framework for analysing water governance among the poor. Drawing on empirical case studies and Giddens and Long's social theories, Franks and Cleaver

acknowledge that water governance is a *"system of recursive actors, resources, mechanisms, outcomes and processes which mediate a society's access to water"* (2007:303). Osinde (2004) and Plummer and Slaymaker (2007) identify key water governance actors as 'non-state agents', such as the users of water, Non-governmental Organisations (NGOs) and the private sector, all of whom share an interest and role in addressing public issues in a socially acceptable manner. Franks and Cleaver add that the mechanisms include among others formal and informal water institutions, water rights (the 'ultimate result of water governance' - Plummer and Slaymaker 2007:2), and technology, which are *"arrangements that can be negotiated and which are likely to change over time"* (2007:295). The processes include negotiation and decision-making and political voice, all of which are characterised by agency and power which are essential to understanding the gendered dimensions of water governance (Cleaver and Hamada 2010:28).

However, despite their outstanding work, Rogers and Hall and Franks and Clever do not adequately address gender in their water governance frameworks, especially how gendered power relations play out at local levels. Nevertheless, an attempt was made by Frances Cleaver and Kristin Hamada, in their discussion of the 'troubled relationship' between good water governance and gender equity. Arguing that understanding the gendered ways in which water governance works requires taking what they call *"a really holistic view"*, Cleaver and Hamada remind us that the whole system of water governance - material and non-material resources, mechanisms such as committees and technology, processes and outcomes, such as voice, needs and concerns - is gendered or is not gender neutral (2010:29-30). In view of this, water governance is used in this study to describe a system of actors, resources, mechanisms and processes that differentially affect the access of men, women, boys and girls to water and their participation in local water management, as demonstrated in Chapters Five, Six and Seven.

It is important to note here that there are other concepts used in literature that are akin to water governance. These include 'good water governance', 'effective water governance' earlier mentioned by Rogers and Hall, and 'pro-poor water governance'. The first two are used interchangeably in the literature to emphasize the elements of water governance in specific contexts; 'pro-poor water governance' is commonly used in reference to developing countries or poor communities and seeks to include the 'poor actors' in water governance (Cleaver *et al*. 2005;

Franks and Cleaver 2007), including women and disadvantaged groups. Pro-poor water governance has also been classified in many ways, and is analogous to models such as the 'community-driven approach', or what is commonly known as the Community-Based Management System (CBMS). CBMS, which is being followed in rural Uganda and Makondo Parish in particular, relies on the knowledge and efforts of local water users and their ability to police themselves. In particular, the costs of maintaining water facilities are borne primarily by the users, and include repair and replacements of worn out parts; labour costs of O&M through either Caretakers or Hand Pump Mechanics (HPMs); and administrative logistical requirements, such as stationery, public transport, and fuel. As we shall see in Chapters Five and Seven, CBMS, at least in this case study seems to promise more than it can deliver, especially for poor women.

Another concept that is relevant at micro political levels is that of water management. According to Margreet Zwarteveen (1997), water management refers to *"activities of collecting, rationing and using water, as well as authority or decision-making over water"*. Whereas Zwarteveen takes into account gender issues such as water collection and decision-making processes at different levels, she ignores other crucial mechanisms of access, such as payment arrangements. A more encompassing definition is given by Franks and Cleaver (2007), who view it as *"the actual processes by which water resources are allocated and delivered"*. These processes include context-specific conscious and unconscious activities of negotiation, decision-making and action that in turn affect the resources, mechanisms and outcomes, as discussed earlier in this section. In this study, a merger of Zwarteveen and Franks and Cleaver's ideas is sought, by describing water resource management more broadly as the social and gendered processes that determine access to water, water collection and participation in decision-making at different geo-political levels. So far, we have discussed the concepts of gender, water resources and water governance, noting that participation is a key aspect of this multifaceted process. The next question therefore is how participation is understood in development literature, how it has evolved to date and the place of women and men in it.

2.3 Understanding Participation

Participation has been hailed as an ally of democracy and the freedoms of association and expression (Gómez *et al*. 2010; UNDP 2012; Young 1990), and a key 'bottom-up' approach in

development. In most cases, participation is defined according to the purpose and context in which it is used, although power or control by an authority, citizens or both is central (e.g., Cornwall 2008; Hickey and Mohan 2004). For example, the World Bank (1996) broadly defines participation as *"a process through which the public influence and share control over development initiatives, decisions and resources which affect them"*. Another more political definition is given by Stoker (1997), who refers to participation as members of the public *"taking part in any of the processes of formulation, passage and implementation of public policies"*. Whereas both definitions recognise power sharing, the term 'public' seems to be gender blind or less gender-specific.

Often associated with concepts such as good governance and empowerment, participation is also thought to enable the poor to influence decisions and exercise power through key institutions in society. As echoed by UNDP (2012):

> *Participation involves enabling poor people to influence decisions affecting their wellbeing, so that they expand their capabilities. Decisions taken through genuinely participatory processes are more sustainable because they reflect the beliefs, preferences and values of the people who are most affected. Local governments, producer organizations, and civil society and community organizations are critical institutions for strengthening participation and voice by widely dispersing political, economic and social power.*

Thus, participation, just like participatory governance encompasses democratic governance that provides ample opportunities for actors to engage with government, or local governments, and proposes that those that are most affected by a given decision should have the most say (Evans *et al.* 2005; Gaventa 2004). Hence, both citizen participation and participatory governance underscore the need to involve all people in a community, irrespective of their status in decisions that affect them. In development, those that are most affected tend to be the marginalised, such as poor women, who are 'dynamic promoters' of social transformations in society and active agents of change (Sen 1999). Thus, an understanding of the history of participation and how it has evolved to date is important here.

One of the earliest influential contributors to the community participation debate was Sherry Arnstein, who, in her 1969 classic, *A Ladder of Citizen Participation* argued that participation should redistribute power so as to enable the 'have-not' citizens to be deliberately included in development. Arnstein proposed eight forms of participation grouped under three components:

non participation (which involves manipulation and therapy); tokenism (placation, informing and consulting); and citizen power (with partnership, delegated power and citizen control as activities). For Arnstein, development projects that worked towards citizen control, the highest point of the ladder were more 'participatory' than merely informing and consulting citizens, as the former addressed the interests of the marginalised and encouraged the sharing of power between the project initiators, authorities, and 'intended beneficiaries'. Arnstein's model, though useful in understanding power differences in participation, may not clearly identify the implications for men and women at each of its levels or for example how gendered citizen control can turn out to be at micro political levels. In fact, the relationship between citizens and development agents in participatory development has led some theorists to query the various forms and intentions. For instance, questions arise regarding substantive or 'communitarian' participation, with citizenship as an obligation (or for community development), or participation as a right as in liberal citizenship, sometimes called political participation or alternative development (e.g., Cleaver 2004; Hickey and Mohan 2004).

Following Arnstein's model, various social theorists advanced participation typologies that were more cognisant of the power of individuals and communities, or 'empowerment'. Jules Pretty, in her work, *Participatory Learning for Sustainable Agriculture* proposed seven forms of participation in development: passive; information giving; consultation; participation for material incentives; functional participation; interactive participation and self-mobilisation. Of these, the last three are key to achieving sustainable development. For example, functional participation involves people participating in a project or program by *"forming groups to meet pre-determined objectives related to a project"*, and that the involvement may be interactive and involve shared decision making (Pretty 1995). Pretty describes interactive participation as more of a learning process with local communities *"participating in joint analysis, development of action plans and formation of strengthening of local institutions"*, hence gaining a stake in maintaining structures and resources. One year later, Sarah White, produced another seminal piece, *Depoliticising Development: The Uses and Abuses of Participation*. White expanded on Pretty's ideas, and suggested other vital forms of participation. Arguing that participation is *"a dynamic and political process laced with power relations and struggles"*, White outlined four main types of participation: nominal, instrumental, representative and transformative. For White, nominal

participation involves an implementing agency simply showing that it is 'doing something' largely for legitimation. Instrumental participation, which is analogous to Pretty's functional mode, draws on a community's input and is intended to make a project more cost-effective using local facilities, while representative participation seeks to reduce dependency and give people some leverage to influence the shape of a project/activity, by giving them a voice in determining their own development. Representation is generally not well understood in most participatory writings (Hickey and Mohan 2004:19), hence this study attempts to examine its gender dimensions in water governance as explored in Chapter Seven. According to White, transformative participation or 'empowerment'[5] involves people in *"considering options, making decisions and taking collective action"* to fight injustice (1996:8), as elucidated in Chapter Three. In view of the above participation typologies, current paradigms, which I now turn to, refer to issues such as 'tyranny', transformation and change.

Participation: From a Tyranny to Transformation and Change

We have seen that since the 1960's, the meaning and classification of participation has been evolving to accommodate the social, economic and political changes in the developing world. Most development theorists categorise participatory approaches as a means and an end, based on their purposes (e.g., Nelson and Wright 1995; Cleaver 1999; Cooke and Kothari 2001). Theorising power and participatory development, Nelson Nici and Susan Wright contend that as a means, participation serves as a governance device *"to achieve efficiency, with people's involvement in development projects being associated with their investment in the success of the projects"* (Nelson and Wright 1995:1). In contrast, when as an end or 'people-centred', participation serves to satisfy local needs and to empower communities or groups by enhancing their capacity to improve their lives. Thus, as an end, participation is meant to facilitate social change to the advantage of marginalised groups, and to enable them to 'control their own development' (e.g., Schrijvers 1995; Michener 1998; Sen 1999). Others suggest that in enabling communities to control their development, participation is political and can transform poor women and men (e.g., Cleaver 1999; Hickey and Mohan 2004).

[5]the ability to decide or work out what to do or 'to act', effect change or exercise choice or power, and the effects of the choices made on the well-being of the persons involved (e.g., Jackson 1998; Wilkinson 1998; Kabeer 2000).

Also, the purpose and process of participation in development has been evolving, in line with the typologies advanced by Arnstein, White and other theorists discussed earlier. Over ten years ago, Bill Cooke and Uma Kothari documented *Participation: The New Tyranny,* in which they alerted us that participatory processes were not so empowering. Cooke and Kothari noted that participatory processes were instead characterised by *"illegitimate and or unjust exercise of power",* or were 'tyrannical', with agendas set prior by development agencies that rarely sought the needs and interests of poor communities (2001:4). Cooke and Kothari further argued that *"a misunderstanding of power underpins much participatory discourse"* (2001:14), and called for more focus on the power relations in participatory processes. The work of Cooke and Kothari was followed by Samuel Hickey and Giles Mohan's seminal piece, *Participation: From Tyranny to Transformation? Exploring New approaches to Participation in Development*. Hickey and Mohan draw our attention to the original objective of participation as an aspect of citizenship rights and a means of challenging subordination and marginalization, citing processes that de-politicise and co-opt participation at the local level as a technical method rather than a political process of empowerment. Like Cooke and Kothari, the authors argue that current modes of participation are more instrumental and tyrannical, and that projects front participation models that are disconnected from the social, political and economic conditions that create poverty and exclusion. Hickey and Mohan contend that *"the proper objective of participation is to ensure the 'transformation' of existing development practice and, more radically, the social relations, institutional practices and capacity gaps which cause social exclusion*" (2004:13).

Thus, transformative participation models ought to view participation as a socially embedded phenomenon linked with social (power) relations at different levels (Cooke and Kothari 2001; Khadka 2010:80). For example, as a process, 'empowerment' gives the 'powerless' a voice and increases their capacity to participate in more meaningful community decision-making (Moriarty and Butterworth 2003). In their scrutiny of empowerment in organisations, Blanchard *et al*. (1996) argue that people are not necessarily powerless; they have power in the form of their knowledge and motivation, and only need to 'let their power out'. The same authors also outline other important capabilities that constitute empowerment, such as the ability to consider a range of options from which to choose; ability to exercise assertiveness in collective decision making;

the ability to access information and resources for decision-making; having positive-thinking about the ability to make change; and increasing one's positive self-image and overcoming stigma. Hence, on top of recognising the rights-based approach[6], transformative participation has the potential to increase agency and voice of the marginalised in decision-making processes, as explored further in Chapter Three.

More recently, Erhard Berner has built on the ideas of Cooke and Kothari (2001) and Hickey and Mohan (2004) by identifying three key characteristics of current participatory practices. Berner contends that participatory practices are either 'ritualistic' (in which development agencies and experts do not share effective decision-making powers and "*consultative meetings become rituals to legitimise plans"*); 'exploitative' (similar to instrumental participation and requiring communities to contribute work and money), or 'exclusive' (with only a few agents participating, such as men, the rich and self-styled leaders (2010:2-3). Essentially, what we see here is that participation should enable poor women and men to engage in decision-making about aspects that concern and affect their lives. This can only occur if more transformative approaches that allow the marginalised to question the structures of power (e.g., Cooke and Kothari 2001) and voice their concerns and interests in local spaces are adopted. It is through this that women can for example modify the social and power relations in water governance at individual and collective levels, and later change their lives. But can local water institutions in developing communities facilitate these transformative ideals? We explore these questions in Chapter Seven in the context of Makondo Parish.

2.4. Linking Gender and Water Governance

As we have already seen, gender equity is a vital aspect of 'good' water governance. It is derived from the principle of 'responsiveness' that requires actors to take into account the rights, needs and concerns of women, men, and disadvantaged groups in the delivery of water services (Davidson and Stratford 2007; Plummer and Slaymaker 2007; Singh 2008; Harris 2009).

[6] which views development as both a means and an end, and that everyone, regardless of their social status or gender, are entitled to and enabled to meet their basic human rights and privileges e.g., Symington 2002; Gaventa 2004; Gómez *et al.* 2010; UN Human Rights Council 2010.

Research from many parts of the developing world indicates that there are gender differences in access and management of water. I explore access to water in the next sub-section.

2.4.1 Gender and Access to Water Resources

In development, access to water denotes amounts of water used per person per day, distance moved and an "improved" water source. According to the Joint Monitoring Programme, access to water refers to *"the ability of communities to use 20 litres of water per person per day from an improved source that is not more than 1km away from their dwelling"* (WHO and UNICEF 2000). In Uganda, access to water is defined as *"the ability of households to use 20 litres of water per person per day from an improved source that is not more than 1.5 km away from their dwelling"* (GOU 2007). Both definitions emphasize water amounts, distance, "improved" water sources and dwellings or households. Following these definitions, current statistics indicate that 780 million people (about 22% of the world's rural population), 40 percent of whom live in SSA still use "unimproved" sources of drinking water (WHO and UNICEF 2012), and five out of six people without access to a safe drinking water supply reside in rural areas (WHO and UNICEF 2010; Rural Water Supply Network [RWSN] 2012). Access to safe water in rural Uganda has improved in the past 10 years, but many people remain underserved. Between 2005 and 2006, access to water stood at 61 percent and increased to 65 percent in 2009, and currently stands at 64 percent (GOU 2010b,2011, 2012:65).

In this research, a more sociological, contextual and gender-specific characterization of access was adopted. Access was viewed more as the ability of men, women, male and female youths, boys and girls to obtain any amount of water per day for their households from "improved" and "unimproved" water sources that lie within any distance. This definition takes into account the local contextual realities, particularly the structural and rights-based modes of access to water and gender issues in water collection (and other social, environmental and health conditions and processes) that emerged from Makondo Parish, as explained in Chapters Four, Five and Six.

Access to water resources in general is also said to be complex or composed of 'systems' (e.g., Crow 2001; Franks and Cleaver 2007). Researching on gender and material inequalities in access to water in rural areas of the Global South, Ben Crow acknowledges that peoples' access to

water is complex and varied, and that it involves *"natural conditions, human tools and social practices"* (2001:4). Crow further identifies five 'modes of access' to water: private ownership — of land or a pump, with land ownership rules; common property, or getting water from say a pond or public tank through communal access rights; open access, or unregulated access say to a river or wetland; state-backed provision, for example through a government project; and market access, such as purchase of water from the owner of a pump or water truck. Crow says that each of the above modes of access has particular *"social, technical and environmental conditions"* that enable people to gain command over water. Under the social characteristics specifically, he mentions labour-time, monetary cost, how decisions are made and by whom, and notes that gender inequalities occur in each of the modes of access. Crow further singles out differences in class, ethnicity, ownership, and the nature of existing or prescribed 'rules', which in most cases tend to marginalise women and the poor.

Hence, just like Jesse Ribot and Nancy Peluso (2003), Crow (2001) and Beccar *et al*. (2002) suggest that access to water is mediated by water rights, which provide holders with the authorisation to subtract water from a water source, including particular social privileges, obligations, claims and entitlements associated with such authorisation. In their feminist analysis of water control and gender inequalities in the neoliberal era, Rhodante Ahlers and Margreet Zwarteveen find that water rights differ from one society to another, and are negotiated and arranged in different social domains, with *"varying norms and rules which also have distinct origins and sources of legitimisation"* (Ahlers and Zwarteveen 2009:412). These norms and rules also have varying implications for men and women, and, like most rights are contested, hence shaping access and ownership of (water) resources (Rangan and Gilmartin 2002; Cornwall and Nyambu-Musembi 2004; Coles and Wallace 2005). For example, Crow notes that *"ownership of land above, as ground water acquifer, or adjacent to a river, gives rights in most parts of the world to those water sources"*, yet women *"own neither land nor pumps"* (2001:12-13).

In their framework for water governance in poor communities, Tom Franks and Frances Cleaver posit that access to water is also shaped by a combination of over-lapping formal institutions such as water user associations; technologies such as hand pumps; 'social resources' such as

families, kinship groups or what they call 'located gender relations'; and rights and empowerment resources such as legislated minimum quantities of water, local property rights, as well as quotas for representation in governance bodies (2007:294-295). This framework is explained in more detail in Chapter Three. At this stage, it is important to examine the literature on the afore-mentioned key determinants or modes of access to water and the gender relations. I focus on cross-cutting rights; monetary cost (commodification or water pricing); 'labour-time', and other aspects of water collection; and representation, which is covered under participation and water governance.

Gender and Commodification of Water

Women and marginalised groups' rights and access to water in general is also affected by commodification, or the pricing or setting of water tariffs, which is said to have emerged from 'neo-liberalism' (e.g., Harris 2009). According to Plummer and Slaymaker (2007:5), pricing of water is one of the economic policy measures in 'formal' water governance that is designed to ensure cost recovery and continued use of water resources. For example, communities of water users are required to pay a pre-determined fee, at a household level, in order to access an "improved" water source for a given period as a contribution towards maintenance. Not much is known about commodification or 'water tariffs' in the gender and water literature (Harris 2009:395), but available research shows that user fees or charges may deny poor women and men physical access to water, mainly due to failure to raise the money, or even other related punishments that target defaulting households. This sometimes increases the drudgery that women (and girl children, the water fetchers) face in collecting water. In her study of gender and access to pump water in pastoral communities in Tanzania, House (in Tukai 2005:4-5) recounts how *"women were sitting for most of the day before they could get water"* simply because it was the men who paid for the water for their cattle, and so *"some were reluctant to allow women to take water before their cattle had drunk"*. It has also been reported that in parts of East and Central Africa, women and children walk longer distances to get water from alternative water sources that do not require payment of repair or maintenance fees (e.g., Coles and Wallace 2005; Cleaver 2004; Osinde and Turner 2007).

Women also often lack the money to pay repair fees due to limited sources of income, especially housewives in rural areas who have to turn to their husbands for financial support. Tukai (2005:4) describes how the *"limited financial capacity"* of women in a pastoral community resulted in domestic water use being dependent on a male-dominated system for watering livestock. Women's insufficient access to money to pay fees for water sources and their reliance on men has also been reported in South America (Bennett *et al*. 2008) and different parts of rural Africa (e.g., Ahlers 2002; Boelens and Hoogendam 2002; Coles and Wallace 2005). In many cases, operation or repair fees have also led to misunderstandings between WUCs and the water users they serve, resulting from the former misusing the fees and the subsequent mistrust by the latter. This has been documented in parts of South America (Bennett *et al.* 2008), and in Africa, for example Zimbabwe (Cleaver 2000) and Uganda (e.g., Kanyesigye *et al*. 2004; CREAM 2009). Given all the above hurdles involved in accessing water, it is important to examine how the water is collected in the first place, which is the focus of the next sub-section.

Gender and Water Collection

Available studies indicate that in most rural areas of the developing world, traditional norms dictate the gendered patterns of water collection, often privileging men. Women, many times assisted by girl children, are the primary household water collectors, who also undertake other water-related tasks on a daily basis (e.g., Green and Badden 1994; UNDP 2006; Ghosh 2007; Ray 2007; Bennett *et al*. 2008; WHO and UNICEF 2010a). Many studies also highlight distance and time as the major burdens of fetching water in poor communities. Women and children in parts of Asia (e.g., Devasia 1998; Crow 2001; Crow and Sultana 2002; Sijbesma *et al.* 2009; Karim *et al.* 2012) and Africa (e.g., Thompson *et al.* 2001; Mazvimavi and Mmopelwa 2006:717; UNDP 2006:35; Arku 2010) cover distances ranging from a few metres to 8 kilometres to fetch water, depending on the location of water sources in relation to their households, or the occurrence of environmental hazards such as long droughts that increase water scarcity. For example, researching on the well-being implications of time savings on rural women and men's access to water in the Volta region in Ghana, Arku (2010:239) found out that water sources such as springs, wells and ponds *"were generally located about two to four kilometres away"* from households, and that it was mostly women who walked these distances.

Studies in rural parts of Africa and Asia also indicate that women and children spend several minutes a day (Arku 2010:238; Blackden and Wodon 2006) or five or more hours (e.g., Roy and Crow 2004; Sorenson *et al.* 2011:1523) moving to and from water sources. Also, the average time per week spent collecting water ranges from two to twenty hours (e.g., Boone *et al.* 2011:1832; Crow and Sultana 2002; WHO and UNICEF 2012:31). For example, in their review of water collection in developing communities, Crow and Sultana (2002:712) found out that on average, women in Senegal spend 17.5 hours per week collecting water; those in Mozambique 15.3 hours in the dry season, and those in the Baroda region of India 7 hours, and that female children in Nepal, especially girls aged 10 and over devoted almost 5 hours per week on water collection. The time that women spend collecting water also curtails their ability to undertake other important household and community tasks. In his comprehensive review of access to water in developing communities, Crow (2001:32) rightly summarised this scenario:

> *The many hours that women are required to spend collecting water for domestic uses crowd out other activities. All women's other activities* [such as maintaining the home and bringing up children] *may be curtailed for the long work of water collection to be done.*

Women and children also transport water using heavy containers (which they often carry by hand or head loading), and this impacts on their health. Researching on the health implications of domestic water carrying in Limpopo Province in South Africa, Geere *et al*. (2010:7) described how women carried 20-25 litre plastic buckets or drums and older children 'higher container weights' by head loading, leading to fatigue, and back and spinal pain. Studies in Ghana (Buor 2004), Tanzania, Zimbabwe (Cleaver *et al*. 2005) and other parts of Africa (e.g., Benedict 1998; Ebato and van Koppen 2005; Tukai 2005; Hazell 2010) and Asia (e.g., Upadhyay 2005; GWA 2006; Sultana 2009) have also documented how carrying water fatigues women and children or affects their health in various ways. In some cases, differences in characteristics such as class lead to varying situations. Nandita Singh, investigating the institutional paradoxes underlying gender equitable participation in water governance in Madhya Pradesh in rural India found out that poorer women from lower castes bore the burden of carrying water themselves while women from the wealthier castes and families used donkeys, which reduced their water load (Singh 2008).

Moreover, most studies on water collection indicate that unless there is a drought, men rarely fetch water, and in most cases use technologies such as bicycles, or animals (e.g., Mazvimavi and Mmopelwa 2006; Castresana 2004; Hawkins and Seagar 2010; Hazell 2010). By fetching water only rarely, and accessing bicycles and animals, a privilege accorded to men in many African communities, men, unlike women and children find it less strenuous to collect water as they do not have to use their hands or load it on their heads. Nonetheless, one study in rural and urban Mongolia reported that men were unusually involved in water collection and that they used various methods, including collection by hand (Hawkins and Seaga 2010:25-27). From the above literature, it is clear that women and children face bigger challenges in accessing and collecting water in developing communities. I now move on to discuss participation in water governance.

2.4.2. Gender and Participation in Water Governance

Following the classification of participation by theorists such as White (1996), Hickey and Mohan (2004) and Cleaver and Khadka (2010) as explicated in Section 2.3 and Chapter Three, I will focus on the gender aspects surrounding representation and decision-making processes in water governance in developing communities.

Previous research on representation suggests that there are gender inequalities in water-related decision-making processes and that the voices of women and the marginalised are often ignored. For example, examining the systems of managing resource conflicts in rural South-western Tanzania, Maganga (2002) showed that pastoralist groups were less represented in water institutions and that government officials perceived them as 'backward' and inferior. Another low status group, the 'chronically poor' who lacked money, education, and suffered from poor health were marginalised and excluded from local level water institutions, particularly women. Reporting on the same community, Odgaard (2002) described how men dominated the water user groups and dictated the pace in meetings, with women only having influence at family level and other 'very localised settings'.

Gender stereotypes and roles tend to undermine women's representation in local water institutions. A study on gender and participatory processes in Thailand discovered that all formal water institutions in a river basin were male-dominated, and that a locally powerful dam

irrigation committee (serving all the three study villages) was headed by men since its inception, and was traditionally regarded as a 'male organisation' as only men chaired meetings with representatives from each of the households in the villages (Resurreccion *et al*. 2004). The same study reported that women, who were considered 'housewives', were far less represented in the irrigation committees and formal river basin and sub-river basin committees. Similar trends were reported by another study on the management of a multiple water use system in the dry Tigray region in Northern Ethiopia. Ebato and van Koppen (2005) claim that men were the cultural attendees of most of the community gatherings, such as village water groups and committee meetings. Ebato and van Koppen add that despite the presence of gender balanced formal water committees, there were no women chair or vice chairpersons; they also describe an example of a woman, a committee member who said that *"men are better in dealing with conflicts and making decisions"* (2005:8-12). Singh's study further revealed that women of the upper castes never turned up in most village water committee meetings due to household tasks, and that *"the male relatives of women members attend meetings and take decisions (most commonly husbands and sons)"* while the seats for the lower caste women were largely unfilled (Singh 2008:935). A number of studies done in Africa and Asia also reveal that women and disadvantaged groups are underrepresented in local water management (e.g., Regmi and Fawcett 1999; Meizen-Dick and Zwarteween 2001; Coles and Wallace 2005; GWA 2006; Sultana 2009). However, a study by Makoni *et al.* (2004) on domestic water use in rural Zimbabwe unusually revealed that women were more represented on committees for bore-holes and shallow wells.

Turning to decision-making and agency, earlier studies again indicate that there are inequalities between men and women's voices in water spaces, with the former having more influence in both local water institutions. Franks and Cleaver's study in rural Tanzania discussed earlier reported that women from poor households had no opportunity to exercise their agency in the villages and often 'dovetailed' the decisions made by the more socially dominant farming groups, mostly championed by men. In Thailand, the exclusion of women from membership of irrigation water associations (and public life in general) has meant men's continued dominance over actions related to delivering domestic and irrigation water in the rural communities (Resurreccion *et al.* 2004). Research in rural India (Singh 2008) and Ethiopia (Ebato and van

Koppen 2005), also revealed that most of the decisions of the village-level water institutions were made by men.

Previous studies also indicate that women's views and interests tend not to be heard in water meetings. In her study in rural India, Singh showed how women's caste, for example, influenced actions taken. She recounts how *"the location of two new public hand pumps intended to benefit the scheduled caste women was discussed in the village Panchayat* [local government institution for rural water]. *However, despite the discussion and the original targeted beneficiaries, these were finally installed in the Yadav locality, the latter being the dominant caste in the village"* (2008:935). In Africa, for example, Ethiopia, Ebato and van Koppen (2005) report that issues like water user fees and maintenance activities were also always discussed in water meetings, but men routinely decided on when to revise the fees or collect them and who would participate in maintenance activities for the pumps and the rehabilitated canals; again, women had no influence in these meetings, and their contributions were negligible.

Some authors indicate that non-involvement or non-cooperation does not necessarily mean that women or marginalised groups do not totally benefit from the water sources. Studying women's non-participation in irrigation management in Nepal, Zwarteveen and Neupane (1996) found that gender roles prevented women from participating in a formal irrigation association but they were able to acquire water through other *"kin and neighbour networks"*. This, and the influence of social structures means that participation in water supply projects could be *"less a matter of choice and more a matter of necessity imposed by constraint"* (Cleaver 2004:75). The above literature, some of which is on irrigation associations and not domestic water institutions common in rural SSA (and Makondo Parish, the focus area of this case study), shows that women have less voice in formal water institutions. This then prompts the question of the factors prohibiting the inclusion of poor women (and men) in water-related decision-making.

2.4.3 Barriers to Participation in Water/Natural Resource Governance

A number of social barriers have been advanced to explain the gender differences in decision-making in water governance. Based on available literature, they can be grouped into four: gender

roles; patriarchal beliefs; 'personal' or 'individual' factors; and existing social networks or relations.

First, sex roles restrict women to particular household tasks and increase their work-load, limiting their participation in extra-household water-related (or other natural resource) activities. In many developing communities, women undertake 'triple' roles, that is productive, reproductive and community roles (Kabeer 1994, 2011; Moser 1993). Earlier research in rural India (Singh 2008), Ethiopia (Ebato and van Koppen 2005), other parts of Africa (UNDP 2006) and South America (Bennett *et al*. 2008), shows that women are regarded as 'housewives' responsible for the 'domestic sphere' (that is, performing reproductive and productive roles such as child care, food provision and preparation, and water provision, which increase their workloads) and that only men have to attend water meetings. Singh's study in rural India for example described how *"on the whole, women are responsible for all decisions regarding domestic water management, men are concerned with water management issues outside the domestic sphere"* (2008:937).

Patriarchal beliefs, norms and identities that lower women's status hamper their participation in water management. In many communities, water management is for men, who are culturally responsible for the creation, maintenance and management of water resources 'outside the domestic sphere'. In rural India, women may cover their faces or sit on one side with men sitting on the other side during water committee meetings, and women are not allowed to speak in front of men who are not members of their family (Prokopy 2004). Young married women of the same family, kin group or caste cannot interact openly or face-to-face with elderly men, and women of a lower caste are expected to keep a low profile in public fora (Singh 2008:936). Similar cultural norms restricting women's engagements with men in water spaces have been reported among rural communities in Ethiopia (Ebato and van Koppen 2005) and Tanzania (Franks and Cleaver 2007). Thus, cultural suitability of the venues of the meetings and related factors such as distance (e.g., Singh 2008), kinship relations and caste also affect women's participation in local water spaces.

Research also reveals that 'personal' or 'individual' factors[7], such as level of education attainment, age or maturity, marital status and confidence influence men and women's participation in natural resource (and water) management, and tend to constrain women more. Some studies reveal that women and marginalised groups score low on education or literacy, yet in the local communities, being able to read and write is a prerequisite for one to become a member of a water committee. Ebato and van Koppen, reporting on their study in rural Ethiopia recount a male Key Informant who said that *"it is difficult to find a woman who can read and write and who is capable of negotiating with villagers from other village who could act as a Chairperson of the committee"* (2005:11). In rural India, women's lack of education or illiteracy also limited their representation in formal water institutions and affected their ability to perform key roles, such as that of treasurer on water committees, with men instead taking over the actual role (Prokopy 2004:110-111). Older age or maturity and limited exposure to 'the outside world' also decreases women's chances of occupying leadership positions and even participating in formal water institutions (e.g., Singh 2008:936). Women's confidence, interests, perceptions and attitudes, which are often a result of societal beliefs and norms also negatively affect their participation in water management (e.g., Cleaver and Hamada 2010:35; Haque 2000:74; Upadhyay 2005). In India for example, it was reported that women recoiled from local water committees because they thought they were not capable of actively participating in them, preferring to send their husbands or male relatives (Prokopy 2004:111; Singh 2008). Zwarteveen and Bennet (2005), also researching in India, found out that women feared to jeopardise their social status, and viewed men as traditionally more powerful and better placed to sit on water committees. Other factors that generally affect men and women's participation in water governance include:

- the presence of social networks, kinship relations or farming groups or other collective action groups, which tend to increase women's participation (Beard and Cartmill 2007; Cleaver and Hamada 2010) or even hamper it (Agarwal 2001; Prokopy 2009);
- the associated benefits of participating in collective action, such as financial or income-related gains, which can increase participation (e.g., Agarwal 2001; Goetz 2006; Prokopy 2009; Nuggehalli and Prokopy 2009) or hamper the participation of women when not provided (e.g., Prokopy 2004).

[7] also referred to as 'capabilities' by some water governance theorists

So far, we have examined the literature on gender and water governance in developing communities, and seen it is women are most affected by inadequate access to water and are marginalised in local water spaces. The question of whether the situation in rural Uganda is any different is answered in the next section.

2.5. The Local Context: Rural Water Governance in Uganda[8]

2.5.1 Legal and Policy Framework

Uganda's legislation and policy framework provides for the rights of access to water and participation in water management. First, the constitution, under objective XIV, talks of the state's endeavour to fulfil the fundamental rights of all Ugandans, including access to clean and safe water. The constitution also provides for the rights of women, with Article 33 (1, 2, 4 and 6) prohibiting customs, traditions and practices that undermine women's dignity, welfare, and status. The constitution does not make gender-specific provisions in water governance, but recognises the need for gender balance and fair representation of marginalised groups on all constitutional and other bodies.

Uganda's National Development Plan (NDP), developed from the Poverty Eradication Action Plan (PEAP), the country's development framework between 1997 and 2008 has a vision of *"A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 Years"*, and a theme of *"Growth, Employment and Socio-economic Transformation for Prosperity"*. Just like the constitution, the NDP recognises gender issues, negative attitudes, mind-set, cultural practices and perceptions as key binding constraints to its vision. It states that *"there is discrimination against women in Uganda through traditional rules and practices that explicitly exclude them or give preference to men, and this is a key constraint to women's empowerment and economic progress...."* (GOU 2010a:31). The NDP has eight objectives, three of which are relevant to gender and rural water governance. These are: increasing access to quality social services including water; strengthening good governance (defence and security);

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and, promoting a sustainable population and the use of environmental and natural resources. Under one of its four 'sector clusters'— the social sector, in the water and sanitation (WATSAN) sub-sector, the NDP focuses on indicators regarding access, functionality of "improved" water sources, management and gender, and the number of women holding key positions on WUCs. These provisions, which are empirically investigated in this study, are distinctively outlined in the National Water Statute, National Water Policy (NWP), and the National Framework for the Operation and Maintenance of Rural Water Supplies (NFOMRWS).

The Water Statute, enacted in 1995, provides the framework for the use, protection and management of water resources and supply, the constitution of water authorities, and the devolution of water supply undertakings. In one of its guiding principles, it recognises the role women play in the provision and maintenance of water and establishes water user groups (WUGs) and WUCs[9]. WUGs are the user communities of a given "improved" water source, for example individuals from around 300 households for deep bore-holes or shallow wells and 200 households for a single protected spring. WUCs on the other hand are committees comprising of about seven or more elected water users (occupying positions of Chairperson, Vice Chairperson, Secretary, Treasurer, Source Caretaker, Publicity/Information Secretary, Youth Representative and ordinary members), responsible for the day to day running, operation and maintenance of "improved" water sources in their communities. According to the statute and the revised NWP and NFOMRWS, females should make up 50 percent of the elected representatives of all WUCs. The Statute stipulates that communities should participate in water service delivery, and that discussions involving siting of water sources and the choice of technology should take gender concerns into consideration. It further states that WUCs should prepare operation and maintenance plans (facilitated by the DWO and Sub County water officials) of their respective completed facilities for at least 8 years. As we shall see in Chapters Five to Seven, none of the WUCs in Makondo Parish had an O&M plan.

Enacted four years after the Water Statute, the National Water Policy provides the overall policy framework for the water sector. The NWP also recognises the role women play in water provision and maintenance, and provides for their representation in management of water

[9] Previously known as water user associations (WUAs)

resources at the lowest appropriates levels. For example, it stipulates the roles of key actors such as the Directorate of Water Development (DWD), District Water Officers (DWOs), the private sector and NGOs. In its guiding principles for domestic water supply, NWP recognises community management of services, the full participation of women at all levels in sector institutions and institution making, and states that at least one woman should hold a key position (as Chairperson, Vice Chairperson, Secretary and Treasurer) on any WUC. The NWP also calls for the training of water users because they participate in the choice of water systems, siting and construction of water points, and their daily running and maintenance. In particular, it recognises the need to support women's involvement in design, construction, operation and management of "improved" water supply facilities through training activities and states that women and men's equal opportunity to participate fully in all aspects of community management should be the key criteria. Whereas the NWP clearly outlines that men and women should participate in all activities regarding management of "improved" water sources, this is not usually the case, as we shall see in Chapter Seven.

The National Framework for the Operation and Maintenance of Rural Water Supplies (NFOMRWS), updated in 2011 following an earlier one drafted in 2004, is perhaps more relevant with regard to supporting rural women's representation in WUCs and their participation in O&M of "improved" water sources. Based on the CBMS, the framework defines O&M as the sum total of activities required to achieve smooth running and continuous sustenance of a water facility to ensure long service. Specifically, it defines operation as *"the everyday running and handling of a water facility, involving the actual delivery of services"*, and maintenance as *"the activities aimed at sustaining the water supply in a proper working condition"*. The framework suggests ways of integrating gender into O&M, such as gender sensitivity in the formation of committees and identification of mechanics to be trained during preconstruction, training and construction phases. However, the framework does not make clear provisions on gender and the payment of O&M fees, an intricate aspect that hugely affects women's access to water, as discussed later in Chapters Five and Seven. It only states that women should provide manual labour instead of cash contributions for "improved" water sources such as protected springs. We now turn to the institutional framework for water governance.

2.5.2 Institutional Framework

Generally, Uganda's institutional framework for water management follows a decentralised system, in which powers have been devolved from the national to the lower levels of government. The structure operates at three levels — National, District, Sub County and Village/Community.

At the national level, the key persons are: the Minister of Water and Environment, responsible for initiating national policies, and setting standards and priorities for water resources management; a multi-sectoral Water Policy Committee (WPC) [10], chaired by the Permanent Secretary, which advises the Minister; the Directorate of Water Development (DWD), under the Ministry of Water and Environment (MWE), the lead agency responsible for managing water resources, and coordinating, regulating and monitoring all water and sanitation activities, and supporting all local governments (e.g., financially and capacity building) and other service providers such as NGOs in implementing decentralised water supply programmes.

At the District level, the District Water Office (headed by a DWO) is the lead office for the implementation of all water and sanitation activities. It is responsible for activities such as financial and technical back-up support to Sub Counties; planning and carrying out rehabilitation of water facilities; planning for and co-financing training for staff, local councils and WUCs, and enacting by-laws or ordinances on O&M.

Sub Counties have a Sub County Water and Sanitation Committee, composed of key staff such as the Health Assistant (SHA) and Community Development Officer (CDO), who are responsible for training WUCs and providing back-up support and planning and allocating resources for O&M, among other roles. The Sub County works with the private sector, whose roles include: supplying and distributing tools and spare parts; selecting and training HPMs; maintaining and repairing facilities; and managing water facilities on behalf of the community.

At the village level, water users or WUGs for a particular water source themselves decide on the type of "improved" water facilities they want, pay their share (5%) of construction costs and manage the O&M of the facilities, as also stipulated in the Water Statute and NFOMRWS, in

[10] also the principal body responsible for providing policy guidance to the water sector

line with the Demand Responsive Approach (DRA). The water users are also mandated to participate in planning, site selection and decision making; electing WUCs; improving sanitation and cleaning source surroundings; and making contributions in cash/kind to capital and O&M cost, depending on the type of water technology, with lesser amounts in case of bore-hole, shallow well, or protected spring in that order. There are also WUCs for each "improved" water source, with positions as earlier described in the NWP, and others such as Water Source Caretakers (responsible for organising the community for orderly use; cleaning surroundings of water facilities; undertaking minor service and repairs; protecting the water catchment area and collecting O&M funds), and the Village Chairperson (also known as Local Council I Chairperson, or 'LC I' in short), who is a key member. The WUC is responsible for planning and overseeing O&M; reporting problems; selecting caretakers together with users; engaging technicians such as HPMs and paying for spares and repairs; setting water user charges; hiring and paying caretakers; and making by-laws on the use of the water sources.

All in all, the question of how the gender provisions in the legal, policy and institutional frameworks are working in rural Uganda is addressed in Chapters Five to Seven. And, due to their key roles, many of the actors at National, District, Sub County and Village levels participated in this study, as elaborated in Chapter Four. The next sub-section explores available literature on gender and water governance in rural areas.

2.5.3 Gender Issues in Water Governance

Despite the existence of an elaborate legal, policy and institutional framework for water governance in Uganda; its implementation remains a big challenge due to financial, technical, political and socio-cultural factors. Here, I discuss the literature on gender and rural water governance, beginning with access.

Access to Water

Following the classifications of access to water by theorists such as Crow (2001) and Franks and Cleaver (2007) elaborated in Section 2.4, I explore the key modes or determinants in Uganda. Foremost, like in many countries in SSA, rural domestic water provision in Uganda[11]is based on

[11] with an estimated rural population of 28.9 million people (about 85.2 percent of the entire population, UBOS 2010)

ground water sources, mainly through construction of “improved” water sources such as hand pumps (bore-holes and shallow wells, the principal technology for supplying water to about 1 billion people in rural areas in developing countries — RWSN 2010) and protected springs (or spring wells) (UBOS 2006; GOU 2007, 2010; Asingwire 2011). Unfortunately, many of the hand pumps are not functioning due to causes typical in SSA, such as water quality problems, poor siting and construction, poor management and governance-related factors, such as inadequate supply chains and private sector involvement (Mommen and Nekesa 2010; RWSN 2012b). It is estimated that 20 percent of hand pumps in Uganda have broken down and 17 percent of the “improved” water sources in rural areas are not functioning (GOU 2011; RWSN 2010). Even then, this figure may be much worse due to inappropriate rating methods, lack of appropriate monitoring tools and systems and the implications for funding. All these factors led to the inauguration of the Water Atlas in 2010 (Koestler *et al*. 2010, in Mommen and Nekesa 2010:3).

As noted earlier, most studies on access to water in rural areas in Uganda report that the major “improved” water technologies include hand pumps (deep bore-holes and shallow wells), spring wells (or protected springs), gravitational flow schemes (GFS) and rainwater harvesting (RWH) tanks (Ademun 2009; Asingwire 2011; GOU 2007b; 2009a; 2010; GOU 2002; Nimanya, Nabunnya, Kyeyune *et al*. 2011; Rudaheranwa, Bategeka, and Banga 2003; Socio-Economic Data Centre 2001; Uganda National Bureau of Statistics [UBOS] 2006a). The “unimproved” water sources used by rural communities (30.5 percent of households according to the recent National Household Survey, UBOS 2010:121) include ponds, unprotected wells, streams, wetlands and rivers (National Environment Management Authority [NEMA] 2008b; GOU 2010b). From the available studies, the major challenges associated with access to water in Uganda can be broadly categorised into two: social, and natural or geological. The major social problems include long distances moved by women and children to collect water; time spent collecting water; inadequate use of “improved” water sources; continuous breakdowns; and inadequate O&M mechanisms. The major geological or ‘geogenic’ challenges are the presence of low ground water tables and high levels of mineralisation in some areas (which limit the use of hand pumps due to poor quality of water), with communities opting for RWH and “unimproved” sources in such situations (e.g., Ademun 2009; Asingwire 2011:17).

Beginning with the social problems or constraints, most of the research in rural Uganda shows that women (and children) are most affected. Because of the nature of the water sources and perhaps difficulties related to governance arrangements discussed later, labour is required to collect water. Women (or adult females) collect water in 68 percent of the households (UBOS 2006a), a rather arduous task that they often undertake with girl children through, for example, moving long distances that increase their domestic work load. Following their assessment of the Water and Sanitation Sector Gender Strategy that covered seven Districts, DMTC acknowledged that "*most women and children in Uganda are still burdened with long distances to water sources"* (2009:18). Whereas recent statistics indicate that rural households travel an average of 0.8km to their main sources of drinking water (UBOS 2010b:121), many women travel even greater distances that significantly increase their domestic work load. Studying the water-collection behavior of households in a rural Sub-County in Mbale District in Mid-Eastern Uganda, Sugita (2006:532) reported that women travelled for an average distance of 1.2km to water sources. Other studies have also demonstrated that women move even greater distances (e.g., Rudaheranwa *et al*. 2003; UBOS 2005; GOU 2008; Ademun 2009; Danert and Motts 2009; DMTC 2009; Kanyesigye *et al.* 2004; GOU 2011a). Danert and Motts (2009:5) for example observed that in parts of Sembabule and Isingiro Districts in Central and Southwestern Uganda respectively, women and children walked 5km (one-way) to their nearest water source.

Previous studies also indicate that in some households, the burden of water collection falls on children, who also miss attending school or go to school late because of having to fetch water first (Rudaheranwa *et al*. 2003; Sugita 2006; UBOS 2006). The same studies confirm that when "improved" water sources are not functioning well or are poorly maintained, women are most affected, as they have to move to other alternative sources. Research further shows that rural communities, particularly women and children spend a lot of valuable time collecting water, on top of having to perform other household tasks. Rural communities spend an average of 29 minutes waiting for water (or queuing) at their main water sources (UBOS 2010b:122), and in some areas they spend hours. Queuing is usually due to poor water flow from the sources (mainly due to seasonal changes that precipitate changes in ground water levels), and over-use of the water points (e.g., Danert and Motts 2009). Researching on the challenges of domestic water supply in Amuria District in North-Eastern Uganda, Ademun found out that women waited for

up to 2 hours at "improved" water sources before they could draw water (Ademun 2009:24). Similar delays and long time periods have been reported in other studies in rural Uganda (e.g., Rudaheranwa *et al.* 2003; GOU 2011a; UN-Water and World Water Assessment Programme [WWAP] 2006). Ademun's study also linked spending a lot of time at water points to gender-based violence, as women were sometimes abused and battered by their husbands because of staying out of their homes for too long queuing at water sources (Ademun 2009).

Women have also been reported to suffer from health complications as a result of carrying heavy water loads. For instance, researching on the potential for promoting domestic rainwater harvesting production and distribution chains on a commercial basis in seven districts, Danert and Motts (2009:1) noted how *"the physical burden of carrying water over long distances can also lead to curved spines, pelvic deformations and numerous other injuries in women and children"*. Women's use of technologies such as bicycles is restricted, yet it can reduce on the burden of carrying heavy water loads by hand and also increase on water amounts used in rural households. A study in Mbale District reported that although women's use of bicycles was not a taboo, they (and girls) used bicycles on *"just 3.1 percent of their trips"* (Sugita 2006:531). As confirmed in most studies in developing communities, men seldom collect water in Uganda. Most men collect water (often using bicycles or motorcycles) when their wives are sick or when the "improved" water sources have broken down and the water sources are too distant for the women and children (e.g., Ademun 2009:16; UBOS 2006a; GOU 2009c; Uganda Water and Sanitation Network [UWASNET] 2009).

Regarding the use of "improved" water sources by rural communities, research reveals that many may use "unimproved" water sources (despite the existence of "improved" water sources in their midst), because they are 'free'. Other reasons cited include high costs of maintaining "improved" water sources, refusal to pay repair or maintenance fees, and the long distances between "improved" sources and households, estimated to be between 1.5 to 16 km (e.g., GOU 2002; Kanyesigye *et al.* 2004; UBOS 2010b; Asingwire 2011). Asingwire's more recent study on the effectiveness of the CBMS in 16 districts in rural Uganda reported that women and children used unsafe water sources as alternatives when "improved" sources broke down, and that this contributed to their reluctance to pay O&M fees (Asingwire 2011). Studies indicate that women

and children's use of "unimproved" water sources, especially ponds and unprotected wells puts their lives and those of their children and household members at risk. In her study in Amuria District, Ademun (2009) showed how women's use of dirty water from "unimproved" water sources caused water borne diseases such as dysentery, diarrhoea and typhoid, which further increased their burden as caregivers. Ill-health of women or members of their household as a result of using "unimproved" water sources has also been reported in many areas in rural Uganda (e.g., Asingwire 2011; Nimanya *et al*. 2011; GOU 2010b, 2011a).

The persistent breakdown of "improved" water sources has also been reported in many parts of rural Uganda, and has been attributed to O&M failures such as lack of spare parts; inadequate repairs (e.g., Youth Development Organisation [YODEO] 2007, in Mommen and Nekesa 2010); costly repairs; and failure of the district actors and communities to access trained technicians or HPMs (e.g., Socio-Economic Data Centre 2001; Kanyesigye *et al.* 2004; Consultancy of Rural Enterprise Activities Management [CREAM] 2009; Asingwire (2011:26); Nimanya *et al.* 2011). Some studies have also cited the theft of spare parts due to long distances between the pumps and households, and vandalisms (e.g., Kanyesigye *et al*. 2004:13; Asingwire 2011), which also frustrate operation and maintenance activities and thus impact on women's access to safe water.

Studies show that communities demonstrate ability and willingness to contribute, either in-kind (through labour, construction materials or food items for the workers) or cash or funds for construction and minor repairs of the "improved" water sources (ranging from 200 to 500 Uganda Shillings[12]), collected in monthly to half yearly periods (e.g., CREAM 2009; Asingwire 2011; GOU 2012). Unfortunately, many rural communities do not pay the maintenance and repair fees. Many studies have observed that this occurs because of poor accountability by WUC members; mistrust of WUCs; low incomes or 'costly repairs' that rural communities cannot afford; 'stubbornness' or unwillingness to pay, and in some cases arguing that local taxation should cater for all the repairs (e.g., Kanyesigye *et al.* 2004:12-13; Asiimwe 2009; CREAM 2009; GOU 2009; Nimanya *et al*. 2011). Household use of "unimproved" water sources as alternatives when "improved" sources breakdown, particularly because the former do not require payment of repair fees has also contributed to communities' reluctance to pay operation and

[12] €0.05 to 0.16

maintenance fees (e.g., Asingwire 2011) while others only pay when they know that the water source has broken down. For instance, a study by SNV and NETWAS in the North-Eastern District of Kumi and the Mid-Eastern Districts of Mbale and Kapchorwa noted that water users *"only paid operation and maintenance fees whenever their water points broke down"* (GOU 2009a:85). It is clear here that most of the earlier studies on O&M in rural Uganda do not highlight the gender issues in payment of the fees, or consequences on women and women when communities fail to pay.

With regard to the role of the actors (MWE, DWD, District and Sub County Officials), Kanyesigye *et al*. (2004:15) reported that inadequate funding hampered their work, and that this is a major reason why they do not perform their capacity building or 'soft ware' roles. Indeed, the 2011 Water and Environment Sector Performance report indicated that government funding for the water and environment sector had reduced by over 10 percent in 2010/11, which also affected the rural water sub-sector (GOU 2011b:i). A point to note here is that Districts receive support for rural activities through the District Water and Sanitation Development Conditional Grant (DWSDCG), which should take up 12 percent of the budget (GOU 2007b).

However, some studies reveal that inadequate funding does not sufficiently explain why key actors are not performing their roles. For example, Kanyesigye *et al.* argued that there was no 'overt commitment' from Districts and Sub Counties to allocate resources for 'software' activities through, *inter-alia,* budgeting for routine activities and supporting and monitoring WUCs, and that many preferred to make budget allocations for the construction of new sources, not rehabilitation. These assertions were documented by another study by Danert and Motts (2009), who also questioned the preference for constructing new water sources where there were other options available for the water actors. In addition, and perhaps more importantly, Kanyesigye *et al.* (2004) also demonstrated that many districts and Sub Counties are not sufficiently performing the software activities and do not follow or even know the gender guidelines.

This brings us to the issue of training of men and women in local water management. While the development decade (declared in January 1961 by the United Nations with the aim of alleviating

poverty among poor countries including former African colonies of Western nations) and the more current water decade (2005-2015, also proclaimed by the United Nations in December 2003 with the primary goal of promoting efforts to fulfill international commitments made on water and water–related issues in the Millennium Development Goals) have emphasized training of female technicians such as HPMs, health educators, among others, most of the technicians and local trainees or beneficiaries in rural Uganda are males. To illustrate this, Asingwire (2011:26) noted that the majority of the available "improved" water source technicians (including HPMs, plumbers, GFSAs or a masons) in 16 Districts were males (96.8 %), compared to only three (3.2 %) females, two of whom were from Nebbi District and one from Isingiro in West Nile and South-Western Uganda respectively. Another study reported that of the 70 HPMs who were trained and equipped with personal tool kits and repair boxes in Kiboga District in Central Uganda[13], only 11 were women (GOU 2011a). Some of the little training that women have received has been on rainwater harvesting technologies, such as ferro-cement tank design for purposes of improving access to rain-water harvested water. For example, Danert and Motts (2009:19) showed how a women's group in Rakai District in Central Uganda was the first to be trained in the construction of domestic rainwater tanks in the late 1990's, while Payne *et al*. (2008) reported that 22 women were trained as masons; and another 24 received similar training by Kigezi Diocese in Kabale District in South-Western Uganda (GOU 2009b:57). A few women have also benefited from training on less technical aspects of water such as water use, hygiene and sanitation, such as the 102 women's groups that were trained by various NGOs in the water sector (UWASNET 2009). A major reason why there are few female water technicians in rural Uganda is the patriarchal culture, especially husband control and the stereotypical perception that water technicians should be males. As noted in NFOMRWS, husbands of women who are trained as HPMs or GFS attendants for example *"are reluctant to let them do this work as it involves them spending a lot of time out of home in the company of men in isolated areas"* and that "*the tool kits are heavy and many of the tasks require enormous energy that women may lack"* (GOU 2011a:18).

On right of access, although the few studies in rural Uganda have not explicitly highlighted the gender issues, they outline some causes. For example, researching on how improvements in

[13] By Japan International Cooperation Agency (JICA).

planning, monitoring and evaluation in rural local governments could potentially improve the efficiency and effectiveness of rural water service delivery in Tororo and Wakiso Districts in Mid-Eastern and Central Uganda, Kanyesigye *et al*. (2004:16) described how community members (in essence women and children who collect water) were denied physical access to pumps in order to 'put pressure' on households that were deemed able to pay but simply refused. The same authors observed that vulnerable community members, such as the elderly and the disabled were exempted from paying repair fees, as stipulated in some water policies (e.g., NFOMRWS). However, evidence of such exemptions for the very poor and widowed women for example is limited. As observed by some studies, some WUC by-laws provided women and vulnerable groups with rights of access, but these were in most cases not implemented due to the WUCs being inactive and poor cooperation from local councillors (Kanyesigye *et al*. 2004; Asingwire 2011; GOU 2009a). There is also a challenge of illegal or forceful acts, such as thefts of especially hand pump spare parts due to the long distances between the pumps and households in rural communities, and vandalisms (e.g., Kanyesigye *et al*. 2004; Asingwire 2011). Kanyesigye *et al*. (2004:16) in particular noted that thefts of spare parts in Masulita in Wakiso District occurred because of "*shallow wells being located far away from households"*. Whenever thefts and vandalisms occur, the water sources do not function well or take even longer to be repaired; this perhaps limits women's rights (and ability) to collect get water as they often have to move long distances to alternative sources, as discussed earlier. The next sub-section focuses on participation in decision-making processes.

Participation in Water Management

Here, attention is given to the entire processes of water management stipulated in NWP and NFOMRWS as outlined in Section 2.4. Studies on gender and knowledge or awareness of water resource management in Uganda are few. Nonetheless, a less gender-specific study in Northern Uganda found out that the majority of the respondents knew that they were responsible for maintaining their "improved" sources with local governments helping them with major repairs; and that WUCs consisted of 7 members, whose roles were to mobilize the community, collect maintenance fees and account for them, and repair pumps (Ademun 2009).

On the establishment of the water sources, particularly pre-construction activities, there is limited evidence on the involvement of men and women in selecting or choosing water technologies. Only the water technology wishes of 'communities' have been cited, for example in Masulita in Wakiso District, where they preferred protected springs, not hand pumps because the former are cheaper to maintain (Kanyesigye *et al*. 2004). Regarding representation in local water management, studies show that women are underrepresented at national, district and local levels. For example, women constitute only 25 percent of the total staff of MWE, the lead institution responsible for spearheading gender equitable water resource management in Uganda (DMTC 2009), and one of the Ministry's Departments (Water For Production) has just recruited female social scientists to handle social and gender concerns. As for the representation of men and women at lower levels of rural water resource governance, studies reveal that the participation of women in WUCs is minimal. The statistics show that the number of WUCs with women holding key positions has been declining since 2009. In 2009, 85 percent of WUCs in rural areas had women holding key positions, which decreased to 81 percent in 2010 and now stands at 75 percent (GOU 2009b, 2010, 2011b). Most studies also report that key positions such as Chairperson, Vice chairperson and Secretary are dominated by men (e.g., Ademun 2009; Asingwire 2011:24, 31-32; MWE 2011a:18). Moreover, women's less representation on WUCs negatively impacts on the functionality of "improved" water sources in rural communities. For example, Asingwire's study concluded that *"all WUCs chaired by women were found presiding over functional sources at the time of the visit; all the non-functional water sources were under the stewardship of men as chairs"* (2011:31). This suggests that a higher membership of females on WUCs translates into higher functionality of the "improved" water sources and thus increased access to water for women (and children). Despite their limited participation in WUCs, women actively engage in various forms of "indirect labour" (Coles and Wallace 2005:71), such as mobilizing funds for operation and maintenance and "direct labour", for example cleaning of water sources, which is important for proper hygiene and sanitation (e.g., Ademun 2009:27).

On the voices and choices of communities, research suggests that women are not adequately given a chance to express themselves and air out their concerns in WUC decision-making processes. Men tend to dominate the decision making processes and women cannot influence decisions on say, the type of technology to be used, location of the technology, construction, and

the setting and payment of O&M fees (e.g., Ademun 2009; GOU 2011a:37). Studies claim that women's low participation in local water resource management is due to cultural norms or traditions, individual inadequacies and the failure of government and other stakeholders and technical persons to perform some of their roles. Some of these include: patriarchal cultures where men in communities 'do not take women very seriously' (Nimanya *et al*. 2011:16); lack of time to participate effectively in WUC meetings and trainings due to household tasks; illiteracy; poor education, hence difficulty in decision making; limited skills; low confidence, due to 'limited exposure'; and, inadequate sensitisation of communities on their rights and roles in water and sanitation (DMTC 2009; GOU 2011a). The first constraint is observed from the fact that female HPMs are sometimes stopped from doing their work by their husbands, who fear that it keeps them away from home for long periods of time 'in the company of men' and in isolated areas, yet the HPM tool kits themselves are heavy and many of the repair or maintenance tasks require 'enormous energy that women may lack' (GOU 2011a:18). It has been reported that women are also insulted and disrespected by communities that elect them to WUCs, for example men and children pay no attention to women's enforcement of by-laws such as not washing from the water sources (Asingwire 2011:32).

2.6 Conclusion

In this chapter, I have reviewed literature on gender and water governance. As noted by Franks and Cleaver, Rogers and Hall and other theorists, water governance is indeed intricate, composed of 'systems', or an interplay of water resources, mechanisms of access, outcomes, management processes and actors. In all these systems, power is exercised through 'rules' and socio-cultural practices that impact on women and men differently. The literature has demonstrated that access to water in developing communities is multifaceted, and is composed of the following key interrelated factors: a) water technology, or "improved" and "unimproved" water sources; b) water rights or 'rules', determined by formal and informal institutions; c) 'neoliberal' institutions, such as commodification or water pricing; d) social relations between different individuals and groups, which also determine who collects water; and e) participation in water management, as a process of negotiation and decision-making.

Whereas Crow (2001) and Franks and Cleaver (2007) for example have pointed out the gendered nature of access to water, the literature indicates that not much is known about the gender dynamics across most of the mechanisms of access in rural developing communities, especially in SSA. This is despite the known fact that water is gendered in every society (Coles and Wallace 2005), and that gender shapes how men and women access or benefit from scarce water resources (Crow and Sultana 2002:712; Cleaver and Hamada 2010). Most of the studies on water collection address the effects of distance and time on women and girl children as the main water fetchers. There is little on men and boy children, or on other social and contextual determinants of the burden of water collection. Regarding participation and decision-making, studies show that disadvantaged groups are often excluded, and that the local 'water world' (UN 2004) is dominated by men and more privileged groups, who seem to be more represented in, for example formal water institutions. However, not much is known about the more 'transformative' modes of participation in water governance, such as representation in all processes of decision-making, membership in water institutions, voices, needs and interests from a gender perspective.

Uganda's water policy and institutional framework recognises and attempts to incorporate gender in rural water governance by outlining a number of water institutions at various geo-political levels. However, the implementation of the gender provisions in these policies and frameworks is still a challenge, as we shall also see in Chapters Five and Seven. There is also limited evidence on gender and access to water and water collection in rural areas as, like in other rural developing communities, studies on the former have centred on distances moved, time spent, and to some extent, operation and maintenance. There has been little focus on the gender dynamics in for example water (resource) technologies and tools, formal institutions and repair fees or 'payment arrangements' as described by theorists such as Ribot and Peluso (2003) and Franks and Cleaver (2007). Again, not much is known on the participation of men and women in water-related decision-making processes, as most studies have narrowly focussed on membership in WUCs, ignoring other critical aspects of participatory governance, such as the entire array of activities that characterise the establishment and maintenance of "improved" water sources. Therefore, this study sought to fill the above critical knowledge gaps in gender and water governance, using a case study of rural Makondo Parish in South-Central Uganda, as

explored in Chapters Five, Six, and Seven that provide evidence from this demographic. The next chapter provides an insight into the theoretical underpinnings of this study.

Chapter Three: Theorising Gender and Water Governance

3.1 Introduction

In Chapter Two, I have examined the key concepts in development literature pertaining to gender and water governance, how they evolved, and the complexities surrounding their adoption and use. I have also reviewed the literature on gender and water governance, particularly on access to water and participation, globally and in rural Uganda, illustrating that evidence on these aspects in SSA and Uganda in particular is inadequate and in many cases anecdotal.

The key issue then is how best to theoretically explore the institutions and gender relations pertaining to access to water and participation in water governance, given that no single theory is available. In this Chapter, I examine theories and frameworks from the disciplines of sociology, political science, gender and participatory governance so as to uncover the gendered politics of water governance. First, I explore social spaces, institutional structures and processes, highlighting how they are laced with politics and power. This is then followed by a deeper analysis of the notion of power and how it is exercised, including the more dynamic agonistic model based on the work of French philosopher Michel Foucault, which is then theorised taking into account difference, particularly women as an oppressed or marginalised group. I then hypothesize access to water using a social relational perspective, which emphasizes the ability of individuals, or women and men to use their powers to gain, maintain, and control access to natural resources. Drawing on theories of participatory governance, democracy and difference, and empowerment, I consider the two key forms of participation: representation, which is also an element of democracy and decision-making; and transformative participation. I also theorise the key water-related institutions, structures and processes that can be used to explore the gender issues in water governance in Makondo Parish.

3.2 Institutional Structures: Gendered Spaces and Processes

3.2.1 Social Institutions and Spaces

In most societies, social life and patterns are determined by structures, or institutions, which shape forms, habits, and habitus of individuals (e.g., Sewell 1992; Giddens 2006; Ritzer 2008; Plummer 2010). Likewise, various social theorists have argued that in governance, institutions

provide the socially constructed and shifting spaces for individuals or actors that constitute or are affected by them (Stoker 1998; Laugharne 2003; Gaventa 2006). In his classic, *The Production of Space*, French Marxist Sociologist Henri Lefebvre argues that: *"space is social: it involves assigning more or less appropriated places to social relations....social space has thus always been a social product"* (1991:186-187). For Lefebvre, all struggles and achievements take place in space, and social spaces are humanly 'produced' spaces that are defined, perceived and vivified in various ways. Lefebvre asserts that space *is "...a dynamic, humanly constructed means of control and hence domination, of power"*, and can therefore be explored through examining social (and power) relations, and what he calls the 'spatial dialectic' of identities, activities, discourses and images (1991:24). Expanding on Lefebvre's analysis of the constituents of space, Churchland (1995:123) describes social space as a 'metaphor', an 'intricate space' of aspects or actions such as obligations, duties, entitlements, prohibitions, infatuations, legitimate expectations, and collective ideals.

Developing societies also have institutions that tend to affect the 'social order' of access to resources and participatory governance, its patterns, and the actions of men and women across time and space in varying ways. Recognising space as a lens for viewing power and difference in participatory practices, Andrea Cornwall distinguishes 'political space', 'policy space' and 'space for participation' and reminds us that the structure and organisation of spaces shapes the participation process (2002:2). Cornwall goes on to suggest a range of participatory spaces as 'closed spaces', in which decision-making is done by a set of actors behind closed doors and with no inclusion; 'invited spaces' (such as co-management committees), into which users or beneficiaries are invited to participate by authorities such as government or non-governmental organisations; and 'claimed/created spaces' or 'organic spaces', which are claimed by less powerful actors from or against the power-holders, or created more autonomously by them and come into view as a result of common concerns or identifications or even popular mobilisation around identity or issue-based concerns (2002:24). Gender represents one of the identity realms that determine who is included or excluded in participatory spaces.

Thus, building on Lefebvre's views of spaces as means of power and control, John Gaventa reminds us that institutions determine which actors exist in a particular society and that these

institutions determine their roles, levels of engagement and power. Gaventa continues that examining gender and power does not stop at private or intimate spaces, but also includes 'public' spaces or 'local arenas' which provide what he calls *"arenas of everyday life in which people are able to resist power and to construct their own voice"* (2004:36). Others position themselves in Foucauldian modes of power to argue that power determines which actors are included or excluded and whose knowledge is acknowledged (e.g., Mouffe 1996; Sibley 1995, in Cooke and Kothari 2001:146; Cornwall 2002; Gaventa 2006; Hickey and Mohan 2004). Cornwall (2002) and Gaventa (2004) further add that the diversity of actors makes participatory governance spaces not truly democratic due to:

- unequal decision-making processes;
- failure to facilitate participation of some vital actors or groups, such as women and the very poor, or what de Certeau calls 'a purification of space'(Cooke and Kothari 2001:147) that entrenches rejection or exclusion; and
- the reproduction of unequal power relations through domination by a few individuals with more power to make decisions.

A common and often ignored feature of differentiation in these 'undemocratic' processes is gender, or what it means to be a man or a woman (Franks 2001:86; Cornwall 2003), as elucidated in Sections 3.5 and 3.6, and Chapter Seven.

As noted earlier, institutions provide spaces for actors to gain or control access to resources and to participate in their governance. These institutions and spaces are not gender neutral and have heterogeneous actors, comprising of men and women and other marginalised groups. A more sociological and broader perspective requires viewing social institutions as gendered so as to discern the extent to which the overall institutional structure and character of particular institutional areas are formed by and through gender.

3.2.2 Institutions, Processes and Gender

In the previous sub-section, we have noted that social spaces are socially constructed and are not gender neutral. As some theorists explain, gender entails relations of power and domination that operate beyond the individual to include all levels of social structure or external 'larger entities' such as institutions, social processes, cultures and organisations (e.g., Aries 1996; Wharton

2005:54). Through their 'organised or established patterns' (Wharton 2005:65), institutions tend to be gendered in their processes, practices, images and ideologies, and, eventually in how they distribute resources and power, and this shapes the distribution of benefits, burdens, actions, roles, and political voice (Blake 2001; Scott 2001). In many cases, social institutions produce and reproduce gendered distinctions and inequalities that disadvantage women and marginalised groups (e.g., Acker 1992; Kabeer 1999; Cornwall 2001; Cornell 2002). In her authoritative work, *Gendered Institutions,* Joan Acker points out this impasse with specific regard to participation:

> *...politics, the state are institutions historically developed by men, currently dominated by men, and symbolically interpreted from the standpoint of men in leading positions, both in the present and historically. These institutions have been defined by the absence of women. In spite of many changes bringing women into all institutions, and the reclaiming of women's history that shows their earlier important participation, males still dominate the central institutions.*
>
> (1992:567)

Acker further posits that investigating gender and the distribution of power in social structures requires us to examine four inherently connected processes and (organizational) practices, whether obvious or invisible:

- overt decisions and procedures that control, segregate, exclude, and construct hierarchies based on gender and other sources of difference such as class;
- the construction of images, symbols, and ideologies that justify, explain, and give legitimacy to institutions, and in which 'hegemonic masculinity' leads to the portraying of a 'successful organization' as one that is aggressive, goal oriented, competitive, efficient, but rarely supportive, kind, and caring;
- processes of interaction between individuals and groups as the medium for institutional functioning, decision making and image production; and
- 'internal processes' in which individuals engage as they construct personas appropriately gendered for the institutional setting, such as gender identity and appropriate female or male demeanour and behaviour in institutional politics, which may also vary by class, race, and ethnic location (1992:567-568).

Based on Acker's assertions, it is clear that a starting point for understanding gender in water governance would be the broader society in which water is delivered and managed at different

levels. This would also entail examining processes such as ‘mechanisms’ of access to water; decision making through meetings and how they are socially legitimated; and the institutional or organisational politics that shape how poor women, men, and marginalised groups are included or excluded in water governance, as explored in Chapters Five, Six and Seven.

Therefore, institutions, processes and relations are about power, and how one gender group dominates the other in ways that are socially and historically determined. In water governance, access to water, a scarce and precious resource in rural developing communities, and participation in activities that govern individuals occur through spaces characterised by relationships of power and control, as examined in Chapters Five and Seven. We shall now explore power, domination and discourse, and how these play out in governance and participatory processes from a gender perspective.

3.3 Power, Domination and Discourse

3.3.1 Considering Power

In sociology, power is largely a contested term, and its conceptualisation is based on political and theoretical interests (e.g., Lukes 1974:9; Radtke and Stam 1994a; Oliga 1996; Giddens 2006). All social interactions are defined and permeated by the exercise of power, whether between love relationships, institutions or economic relationships (Foucault 1983; Stewart 2001:10). Social theorists conceptualise power as capacities located in social structures (‘objectivist’ view, based on the structuralist ideas of Talcott Parsons and Karl Marx); as being possessed by agents (‘subjectivist’ power, in which agents act individually or collectively and is either pluralist, elitist, or radical); and as a property of interaction among social forces (‘relationist’ view, with power understood as the ability of persons or groups to impose their will on others despite ‘resistance’) (e.g., Blau 1964:117, in Radtke and Stam 1994:3; Foucault 1983; Oliga 1996:70-73). Despite the three all-encompassing sociological perspectives on power, the concept has remained an ‘enigmatic social phenomenon’ (Oliga 1996:69), particularly the conceptions of humans as either objects or subjects.

The radical or “three-dimensional view” of power advanced by Steven Lukes seems to be of great relevance in understanding gender relations and positions of disadvantaged groups with

regard to access to resources and participation in decision-making processes. Positioned in subjectivism and radical Weberianism, Lukes argues that power is not just about the behaviour or individual attempts to secure desired outcomes through decision-making processes; it also includes social forces and institutional practices as sources of bias mobilization, control over political agenda (through ideological processes of preference shaping and selective perception), and articulation of what count as social problems and conflicts, and latent conflicts representing what he calls *"a contradiction between the interests of those exercising power and the 'real' interests of those they exclude"* (Lukes 1974:24-25).

In this respect, the prominent work of French Philosopher Michel Foucault on power provides more useful insights. First, in a conversation with Gilles Deleuze in 1972 on 'Intellectuals and Power', Foucault explained the significance of power, observing that:

> *The question of power remains a total enigma. Who exercises power? And in what sphere? We now know with reasonable certainty who exploits others, which people are involved. But as for power, we should investigate the limits imposed on the exercise of power—the relays through which it operates and the extent of its influence on the often insignificant aspects of the hierarchy and the forms of control, surveillance, prohibition, and constraint. Everywhere that power exists, it is being exercised. No one, strictly speaking, has an official right to power; and yet it is always exerted in a particular direction, with some people on one side and some on the other.*
>
> (Bouchard 177, in Smart 2004:66)

For Foucault, *"power is everywhere, not because it embraces everything, but because it comes from everywhere"* (1978:93, in Dreyfus and Rabinow 1983). He adds that power is exercised through a net or web and that it is not something that is possessed by any single individual; instead, individuals are *"simultaneously undergoing and exercising this power"* (1980:98). Hence, by arguing that power operates in various forms and that it was not finite, Foucault questioned the primacy of objectivist, subjectivist and relational assertions as separate forms of power. In one of his classic essays, *History of Sexuality,* Foucault employs a Nietzschian but non domination-repression analysis (Mills 2003:254) to propose that modern power is mobile; a 'moving substrate of force relations' that emerge from every social interaction. Foucault notes that:

> *Power must be understood in the first instance as the multiplicity of force relations immanent in the sphere in which they operate and which constitute their own organization; as the process which, through ceaseless struggles and confrontations, transforms, strengthens, or reverses them; as the support which these force relations find in one another, thus forming a chain or a system, or on the contrary, the disjunctions and contradictions which isolate them from one another; and lastly as the strategies in which they take effect whose general design or institutional crystallization is embodied in the state apparatus, in the formulation of the law, in the various social hegemonies.*
>
> (Foucault 1981: 93-94)

Foucault's work is also important in understanding the subject-object thesis and relationist perspectives of power as power that occurs or is exercised at micro political levels, or "*specific conditions of particular struggles in everyday situations"* (Oliga 1996:76) in a form of action and knowledge. In his genealogical analyses, notably in his works *Discipline and Punish (1975)* and *The History of Sexuality* (Vol. 1), Foucault draws our attention to the fact that modern power relations are relationships between power and knowledge. He notes that:

> *Power produces knowledge [and not simply by encouraging it because it serves power or by applying it because it is useful]; that power and knowledge directly imply one another; that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations.*
>
> (1977:26)

Foucault adds that power-knowledge relations are concerned with the subject, forms, modalities, practices and what he called "*techniques of self*" through which "*the individual is constituted and becomes conscious of himself as a subject"* (Smart 2004:65).

The earlier objective-subjective realms of power are used by some gender theorists, who view social or gender relations as power relations involving the domination and subordination of marginalised groups at different levels. In many cases, one marginalised group (often women), are subordinated by men, the dominant group (e.g., Butler 1993; Kabeer 1994; Tong 2008). For example, in her work, *Woman's Relationship with Herself: Gender, Foucault, and Therapy,* Helen O'Grady argues that women are vulnerable to self-policing because of their association with the body and sexuality, and because patriarchy (addressed later in Sub-section 3.3.3) dictates men as the standard of what is normal, rational and good. Discussing Foucault's

discourses of power, the power-laden processes of self-knowledge, and the deconstruction of the 'true' or 'essential' self from a post-structuralist perspective, O'Grady (2005) contends that cultural messages such as patriarchy instruct women to view themselves with a hostile lens. According to O'Grady, this hostility takes the form of powerlessness, shyness, anxiety, lack of entitlement (self-sacrifice), self-doubt, self-hate, comparison, and self-blame, among others. Others posit that gender relations reflect 'gendered subjectivities', in which men exercise oppressive, patriarchal or subjective forms of control over women, and the actions of individuals themselves may reproduce male domination or maintain gender inequalities without continued external coercion (Radtke and Stam 1994:6; Lukes 2005:63). Also, Foucault's ideas of modern power are parallel with those of some earlier theorists such as Ronald Dahl, who, in his seminal work, *Who Governs? (1961)* argues that power is more dispersed and not held by a selected few; it is held by many social groups or actors, who include women and men.

Thus, following from Lukes, Foucault and Dahl, power struggles occur among actors in social and cultural relations (including gender) and at various socio-political (household or formal institutions and organisations) or geo-political (micro, meso and macro) levels. The liberal feminist perspectives on power as being structural, competitive and hierarchical, or a resource or 'social good' that needs to be shared or distributed equally (and roles alternated between women and men) at household levels and in public domains (e.g., Wolf 1993; Walter 1998) support Foucault's ideas on power and resistance explained in the next sub-section. As we shall see later on in this Chapter, the struggles or tensions that occur between women and men in the governance of water at various socio-political levels also determine whose knowledge is acknowledged and can also be potentially transformative for women.

3.3.2 Power, Discourse and Gender

Theorising power and gender is complex. However, attempts by some gender theorists tend to equate women's experience or subordination with 'difference' while others principally rely on power theories that are not gender-specific (Radtke and Stam 1994:5), such as the influential thoughts of Foucault, Althusser and Derrida. Many political, sociological, feminist and gender academics theorise the gendered dimensions of power and the potential transformation of power relations using the philosophical works of Michel Foucault (e.g., Bartky 1988; Bordo 1989;

Butler 1990; Hartsock 1990; Deveaux 1994; O'Connor 2000; Cornwall 2002; Amigot and Pujal 2009). Non-essentialists such as Kerfoot and Knights have argued that Foucault's work *"dissolves conventional dualisms at the same time as it avoids both the gendered essentialism and disembodied abstractions of his post-structuralist compatriots"* (1994:85). It is therefore useful here to revisit Foucault's analysis of the effects of power on bodies and modern power as articulated in *Discipline and Punish (1975)* and his lectures and writings on *Power/Knowledge, History of Sexuality* (vol. 1) as well as *The Subject and Power*.

A good starting point on power and bodies is Foucault's genealogical work in *Discipline and Punish,* in which he describes the shift from sovereign power to modern regulatory power encompassing disciplinary regimes, systems of surveillance and normalising tactics. Foucault asserts that power in the modern age is 'disciplinary power' or the crossing of power and knowledge among specific political forces, and is a more efficient and effective technology of power; a power that is exercised through its invisibility. Foucault asserts that this power operates by making the knowledge of the individual visible, while the power and effects of this knowledge remain invisible to the subject, hence making the individual an object of knowledge under increasing forms of subjection. Essentially, Foucault gave a historical and cultural analysis of the human body, locating it in a political field invested with power relations, and describing it as a target for the exercise of power and as an object of knowledge. Foucault continues that this occurs through a subjection of the body and its forces through a political technology which constitutes what he calls *"a 'knowledge' of the body that is not exactly the science of its functioning, and a mastery of its forces that is more than the ability to conquer them"* (Foucault 1977:26). For Foucault, the individuals who experience the invisible power acquiesce in it, their acquiescence forming an essential part of the new technology. Acquiescence or submissiveness occurs in 'disciplining' situations, such as the body acting as a political technology, what Foucault described as 'the anatomo-politics of the human body', or 'docile bodies'. Foucault points out that these power relations render the body 'docile and productive' and therefore politically and economically useful. The economic usefulness is the minimum cost incurred in running what he referred to as the *Panopticon*, a prison design by Bentham in which prisoners were perpetually exposed to view, and that what was required was an inspecting gaze under which each individual would police themselves (Deveaux 1994:225).

Foucault's assertions that the body acts as a political technology, is docile and therefore submissive can be used to analyse the power relations between male and female bodies *vis-a-vis* social institutions (Smart 2004:69). They could, for example, explain why women may acquiesce to men's dominance in governance mechanisms and processes due to established values of patriarchy or gendered norms, which are sources of socio-culturally produced knowledge in developing communities. For example, cultural practices and values determine women and children's access to water resources and their higher involvement in water collection compared to men (e.g., Crow and Sultana 2002; Bimla 2003; Coles and Wallace 2005; Ray 2007).

Michel Foucault's *Power/Knowledge, History of Sexuality (vol. 1)*, and 'The Subject and Power' are perhaps equally relevant in gender and governance analysis. As we have seen in the previous sub-section, Foucault came up with an agonistic model of power in which he argues that power is not finite and not a question of domination as such; it is 'everywhere', and *"where there is power, there is resistance"* (1980:95). Foucault adds that individuals challenge fixed identities and relations in ongoing and sometimes subtle ways. By this, Foucault suggests that various forms of resistance occur everywhere power is exercised, including all power relations. One of the forms of resistance highlighted by Foucault is articulated in his theory of discourse. Defining discourse as a set of particular historical practices that give rise to material ideas such as 'the body' or 'the soul', Foucault asserts that power relations are characterized by an intrinsic agonism between forces and counter forces and, hence, mechanisms of power are open to (re)appropriation by counter-hegemonic individuals or groups. He notes that:

> *We must conceive of discourse as a series of discontinuous segments whose tactical function is neither uniform nor stable . . . discourse can be both an instrument and effect of power, but also a hindrance, a stumbling block, a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines and exposes it, renders it fragile and makes it possible to thwart it.*
>
> (Foucault 1981:101)

Thus, according to Foucault, discourses are *"tactical elements or blocks operating in the field of force relations"*, such that the very same discursive elements can be utilized for both hegemonic and counter-hegemonic purposes (Mills 2003:262). In his later works on the hypothesis of power

and resistance, Foucault alerts us that the exercise of power should not be conceived simply in terms of a relationship between individual or collective agents, or as a relationship of violence or consent, but as:

> *a total structure of actions brought to bear upon possible actions; it incites, it induces, it seduces, it makes easier or more difficult; in the extreme it constrains or forbids absolutely; it is nevertheless always a way of acting upon an acting subject or acting subjects by virtue of their acting or being capable of action.*
>
> (Foucault 1982a:220)

Thus, Foucault draws our attention to the fact that power is exercised in terms of a set of actions. He also adds that because power occurs under relationships of provocation and struggle with freedom (including 'non-class' struggles such as those of 'men over women'), opposition or resistance to power occurs when there is freedom, and that power is exercised only over free subjects, whether individual or collective. For Foucault, the conduct or action of these subjects exists within a field of possibilities (Smart 2004:131). These possibilities, according to Patricia Amigot and Margot Pujal include *"…the possibility that points of resistance and their articulation in processes of emancipation will intensify"* (2009:652). In the words of Monique Deveaux, Foucault's notions of power and resistance allow us to analyse the various forms in which women may be subordinated and that "*we* [referring to women] *engage in resistance in our everyday lives"*. She concludes that:

> *Foucault's treatment of power and resistance challenges the assumption that power is located exclusively or even primarily in state apparatuses or in prohibition. By demanding that we look to the productive character of power and to the existence of multiple power relations - rather than to dualistic, top-down force - Foucault helps us move from a "state of subordination" explanation of gender relations, which emphasizes domination and victimization, to a more textured understanding of the role of power in women's lives.*
>
> (1994:231)

Foucault's ideas on power and resistance can be used to analyse the intricate nature of power and gender, or gender relations. Exploring the tension between power and freedom is possible through the analysis of "*technologies of gender and an analysis of resistances and proposals for political action require a special consideration of women's impediments, illnesses, and innumerable sufferings; along with strategies of resistance and subversion that do not conform to the hegemonic mode of the tactics of struggle"* (Amigal and Pujal 2009:664). Thus, a

Foucauldian analysis can be of use in investigating gender differences in access and governance of water, such as the 'subordination' of women's water lives, impediments such as the burden they face in accessing water and attempts by women, as active subjects, to *"resist discourses and practices that subordinate them"* (Hekman 1990:182-186). The latter could be through compliance and non-compliance with rules of formal institutions, and increasing their voices and choices in local water spaces, as elucidated in Chapter Seven, Sections 7.4 and 7.5.

The theorisations of Foucault on power as fluid, relational and his notions of docile bodies, resistance, and discourse/knowledge discussed in this section are also useful in understanding how poor women, men, or marginalised groups can organize and exert power so as to change or transform their 'water lives'. This requires examining the complex relationship between structures, agency and discourse[14] and how power is exercised at individual and collective levels. Thus, gender relations in access to water and participation in water governance can be transformed through individual and collective forms of resistance. We now explore power and patriarchy, and how patriarchal structures and practices give men power over women in water governance.

3.3.3 Power, Patriarchy and Gender Orders

Many gender theorists and feminists posit that gender differences result from patriarchy, or a 'gender order'. For Wharton (2005) and Risman (2004), gender differences in access to power constitute an organisational or structural realm, while gendered narratives explaining the absence of women in senior positions are cultural or relate to gendered selves, stereotyping and 'othering'. In her outstanding work, *Theorising Patriarchy*, Sylvia Walby defines patriarchy and classifies it in ways that are non-reductionist, historical, non-universalist and that recognise individual agency. According to Walby, patriarchy is *"a system of social structures and practices in which men dominate, oppress and exploit women"* (1990:20). Seeking to explain the depth, pervasiveness and interconnectedness of women's subordination, Walby identifies six structures of patriarchy: household production, paid work, the state, male violence, sexuality and culture. At a household level for example, Marxist feminists have argued that patriarchy requires and

[14] As also pointed out by Kabeer 1994; Deveaux 1996: 230–37; Rowlands 1997:13; Cleaver 2001, 2004, *inter-alia*

benefits from women's unpaid labour in the home, while sexuality and male violence such as rape represent ways through which men control women's bodies (e.g., Rich 1980). Walby further classifies patriarchy as 'private' and 'public'. She describes private patriarchy as being based around the family or household, in which men exploit the labour of women, and the latter are confined to the household with limited participation in public life. On the other hand, public patriarchy[15] does not exclude women from public life but ensures that they face inequality and discrimination within the public sphere. Men's domination over women can also be seen as what Raewyn Connell calls 'patriarchal privileging', in which men, the privileged group have access to particular resources, have particular freedoms and also hold special positions in society. Connell (2005) adds that men's privileges result from a gender order or construction of gendered selves which defines, positions and empowers men while making women the less privileged. Connell elucidates this by asserting that male privileging is maintained, not simply by individual or group attempts to intimidate, oppress or exclude, but by women and men's 'realistic expectations', and their beliefs that such patterns are 'natural', 'inevitable' or 'what women want' (Connell 2005).

Therefore, patriarchy or masculine domination over women can also be used to understand the gender differences in access to water, water collection and participation in water governance. For example, as we saw in Chapter Two (and later on in Chapter Six), access to water resources is shaped by who owns land, water technologies such as pumps and bicycles, and money to pay user fees. Unfortunately, women do not own land and pumps and have very limited sources of income, as these are mostly owned or possessed by men. Also, traditional patriarchal norms or gendered patterns of water collection exploit women (and girl children's) unpaid labour in the households, hence a key form of private patriarchy. While men are exempted from water collection, women (and girl children) are the primary water fetchers and therefore have to walk long distances every day carrying heavy water containers. In Chapters Five and Seven, we shall also see public patriarchy (and patriarchal privileging) occurring through men's control of formal water institutions such as Village Chairpersons and WUCs, and the suppression of women's voices in water meetings. At this point, it is essential to examine the water-related social

[15] A result of the feminist movement due to the struggle for rights to vote, access to education and professions, property ownership, marriage etc (Walby 1990).

processes under which power may be exercised, and the implications for women and men. I begin by exploring the question of access to water resources.

3.4 Theorising Access to Water

As examined in Chapter Two, access to water is broadly described in terms of water amounts used per day in households, the distances moved to get water and the quality of water sources or technology used. This view of access is relevant in development, but it is largely devoid of the social and governance-related processes and practices that characterise access to resources such as water and the gender differences therein. A more sociological or 'social relations' categorization of access to natural resources is therefore necessary in order to understand the gender inequalities in access among groups with differing classes, ethnicities, and religious backgrounds at different levels and spheres of society (e.g., Moser 1993; Kabeer 1994:54).

Thus, I turn to Jesse Ribot and Nancy Peluso's path-finding work, *A Theory of Access*. Drawing on Weber (1978), Lukes (1986) and Foucault (1978), Ribot and Peluso alert us that access to natural resources (or 'things') has notions of claims, 'property' or 'rights' and 'abilities', with the latter more parallel with what they call 'bundles of powers' that determine the means or mechanisms, social relations and processes that enable individuals (or men and women in this case) to *"...benefit from things, including material objects, persons, institutions and symbols, through processes they are able to do so"* and that this requires a focus on *"who does or does not get to see what, in what ways, and when* (2003:153-154). Arguing that a wide range of powers constitute the material, cultural and political-economic strands within the 'webs and bundles of powers' that construct access to resources, Ribot and Peluso posit that:

> *Different people and institutions hold and can draw on different 'bundles of powers' located and constituted within 'webs of powers' made up of these strands. People and institutions are positioned differently in relation to resources at various historical moments and geographical scales. The strands thus shift and change over time, changing the nature of power and forms of access to resources.*
>
> (2003:154)

Thus, Ribot and Peluso recognise difference as a determinant of access to resources, and that, like gender relations, the 'bundles and webs of powers' that enable individuals to benefit from resources change with time and place. In view of this, the authors contend that these powers determine which actors 'gain, control and maintain' access to natural resources (2003:154-155). Ribot and Peluso also take a Marxist political-economic theoretical framework based on social change by recognising that social relations and differentiation emerge from cooperation and conflict over benefits and define access control as *"the ability to mediate others' access"*, or *"the checking and direction of action"*. They argue that maintenance of access *"requires the expending of resources or powers to keep a particular sort of resource access open"* (2003:158-159) and further suggest that social actions are access relations that are always changing *"depending on an individual's or group's position and power within various relationships"* (2003:158). The social actions and expending of powers in particular reverberate with the operation and maintenance of water technologies and gendered local governance regimes, as examined in Chapters Five and Seven.

As indicated in Chapter Two, Ribot and Peluso classify the mechanisms and processes that shape access to resources into discursive 'property based' and nuanced 'structural and relational' mechanisms. The property-based mechanisms include dependent 'rights-based' and 'illicit' forms of access; the former attributed by state or traditional law, custom or convention, through social acceptance of practice in gaining benefits, and the latter by ways or actions that are not socially sanctioned. The structural and relational access mechanisms include a combination of political-economic and cultural forms of access, such as technology; markets; authority; labour/labour opportunities; knowledge[16]; social identity; and, 'negotiation of other social relations'. For example, on technology, Ribot and Peluso assert that a fence as a technology *"symbolizes or communicates intent to restrict access"* and that less direct technologies such as pumps *"increase or facilitate the ability to reach a resource"* (2003:165), in this case ground water from great distances below the surface. For labour, the authors argue that:

[16]That is, beliefs, ideological controls and discursive practices as theorised by Foucault (1978) and negotiated systems of meaning (Shipton and Goheen 1992 and Peters 1994, in Ribot and Peluso 2003:168)

> *...those who control access to labour can benefit from a resource at any stage where labour is required throughout the life of that resource or along a path taken by commodities derived from it. Access to labour opportunities includes the ability to labour for oneself and to maintain access to employment with others.*
>
> (2003:167)

As regards social identity, Ribot and Peluso go on to state that:

> *Access is often mediated by social identity or membership in a community or group, including grouping by age, gender, ethnicity, religion, status or other attributes that constitute social identity. Non state authorities, such as community leaders or village chiefs can also control resources and allocate access selectively along identity lines.*
>
> (2003:170-171)

Ribot and Peluso acknowledge that identity based access is affected by market and labour access mechanisms discussed earlier. Drawing on Sara Berry's work on access and 'investment in social relations', the same authors continue that "*access via the negotiation of social relations of friendship, trust, reciprocity, patronage, dependence and obligation form critical strands in access webs"* (2003:172). Crucially, Ribot and Peluso conclude that all the mechanisms of access are forms of social relations in which power is exercised and benefits gained over a long time of resource production, transformation and end use, and that they are *"heuristic, discursive and complex"* (2003:173-174). The ideas of Ribot and Peluso therefore provide a good starting point for understanding the gender issues in access to water in rural developing communities. The authors emphasize the role of power relations and the key social determinants of access, echoing the cross-cutting role of social relations, including gender.

The mechanisms of access to resources suggested by Ribot and Peluso have been documented by other theorists with specific reference to water, some of whom again point out the issue of gender differences. Crow and Sultana (2002) and Moriarty *et al.* (2004) for example acknowledge that the social relations of access to water are influenced by appropriate technology/infrastructure, transport, distance to the water source and money/cost, such as the cost of constructing a water source, and the payment arrangements for establishment, operation and maintenance. In their outstanding work, *Gender, Water and Development*, Anne Coles and Tina Wallace alert us first that *"gender shapes who controls and who accesses water"* (2005:1). This assertion compares with Ribot and Peluso's idea of gender as a key 'grouping of social

identity' that mediates access to resources. Coles and Wallace expand on the arrangements of accessing water, particularly the 'in-kind' arrangements in which labour determines access to water resources, and assert that the provision of communal labour for water occurs in three ways: direct labour, through moving materials, building or digging pipelines; indirect labour, such as collecting money for running committees; and what they call 'ancillary' labour, which involves activities such as preparing food for community labourers (2005:71).

More recently, access to water has been theorised by Tom Franks and Frances Cleaver. Positioning themselves in the theories of Foucault, governance, institutions and structuration, and based on livelihoods, gendered empowerment, empirical research and field insights from the Kimani catchment in rural Tanzania, Franks and Cleaver propose a framework for analysing water governance in poor communities. Franks and Cleaver argue that water governance is shaped by an inter-play of five factors: resources, which are allocative or material, such as the natural environment, or authoritative and non-material, such as institutions and social structures; mechanisms, or negotiable 'context-specific arrangements' for organising access to water, such as technology, formal institutions, rights and empowerment, including property or quotas for representation in governance, and 'socially understood entitlements'; outcomes or social relations and processes of routine practice such as basic access to water; processes of management and practice involving negotiation, decision-making and actions; and, agents, who shape and are shaped by the first three factors through a range of 'gender-specific processes' typified by power struggles (2007:293-297). With specific regard to the mechanisms of access, the authors explain that:

> *the term 'mechanisms' covers a variety of mediators of access ranging from formalised institutions such as water user associations through socially embedded norms of 'proper' use to particular technologies (hand pumps, pipes and so on).....different types of mechanisms may overlap and inter-relate...for example a particular technology will be associated with specific institutional arrangements. Such arrangements may be a complex and dynamic mix of formal village councils, legislated rights to minimum water and socially embedded rules-in-use...specific mechanisms drawing on social resources include arrangements to access water through particular families, kinship groups or located gendered relations....many of the mechanisms are malleable and negotiable, changing over time in response to changing conditions*

(Franks and Cleaver 2007:295)

Acknowledging that water collection is a mechanism of access, Franks and Cleaver explain that aspects such as head loading and turns/queues/ rotations mediate access to water, and that human capacity enables and constrains access through 'physical embodiment', or *"an individual's physical manifestation as a gendered person"*(2007:301). This issue is taken up by other theorists, who add that performing culturally determined 'direct' tasks (Coles and Wallace 2005:71) related to maintaining access to water and ensuring that water reaches men, women and children in households entails physical labour (Crow and Sultana 2002; Koolwal and van de Walle 2010). On this, Cleaver and Hamada go on to state that water is often accessed through 'the labour of others' (2010:37) and that it is women and children who are tasked with providing this labour in poor households. Arguing that understanding the gendered ways through which water governance works requires a 'holistic view', Cleaver and Hamada conclude that *"although the framework* [Franks and Cleaver's] *was devised to help analyse water governance and poverty issues, it can well be used as a tool for gender analysis of water interactions"* (2007:29), since there is gendered patterning of access to water, participation in governance, and poverty. The gender facets of participation in the framework are considered in more detail in Sections 3.7 and 3.8.

In the above discussions, we have noted that access to natural resources is more about abilities of individuals (or men and women), and not their rights, although there are over-laps between the two. A more sociological and gender-aware approach would consider access to water as a function of social relations, which goes beyond examining existing physical water resources and distances moved by men, women and children to water points. In this case, other 'power bundles' or mechanisms such as formal institutions; knowledge; payment arrangements; identities (including gender); complex relations and the real physical and social burden of water collection could highlight other gendered processes and attributes associated with accessing water resources. These are elucidated in analysis Chapters Six and Seven with regard to evidence found in Makondo Parish. I now move on to participatory governance.

3.5 Exploring Gender and Participatory Governance

3.5.1 Participatory Governance

In Chapter Two, we saw that participation is an ally of democracy and is often associated with concepts such as good governance and empowerment, and that it enables the poor to influence decisions and exercise power through key institutions in society. As echoed by UNDP in its recent Africa Human Development Report:

> *Participation involves enabling poor people to influence decisions affecting their wellbeing, so that they expand their capabilities. Decisions taken through genuinely participatory processes are more sustainable because they reflect the beliefs, preferences and values of the people who are most affected. Local governments, producer organizations, and civil society and community organizations are critical institutions for strengthening participation and voice by widely dispersing political, economic and social power.*
>
> (2012:121)

Thus, participatory governance also encompasses democratic governance that provides ample opportunities for citizens and their organisations to engage with government, or local governments, and proposes that those that are most affected by a given decision should have the most say (e.g., Gaventa 2004; Evans *et al.* 2005). In development, those that are most affected tend to be women, who are recognised as the dynamic promoters of social transformations in society and active agents of change (Sen 1999). This brings us to the contemporary participatory governance models and how they can transform or empower disadvantaged groups.

3.5.2 Transformation and Difference

In Chapter Three, we saw that the concept of participation has been evolving, following the important works of social theorists such as Sarah White (1996), Cooke and Kothari (2001), Hickey and Mohan (2004) and more recently Gómez *et al.* (2010). In particular, the work of Hickey and Mohan, John Gaventa (2004b) and Andrea Cornwall (2003) provides some useful insights on transformatory governance and issues of power and difference in participatory development, respectively.

First, Hickey and Mohan note that contemporary viable and legitimate approaches to participation in development must recognise its transformative potential, its temporal and spatial nature, inclusion and representation (2004:12-20). They add that participation ought to be viewed

as based on citizenship, a means of challenging subordination and marginalization, and that it should transform existing development practices, social relations, and institutional practices that cause social exclusion (Hickey and Mohan 2004:13). Exploring the links between transformative participatory approaches and difference, Cornwall (2004) points out that establishing the places where participatory spaces occur should not be based on only democratic ideals but also the actual political, social and cultural particularities, mainly issues of difference and inclusion. She argues that realising the transformative potential of 'invited' spaces requires taking into account three key aspects: the designing of institutions to maximise participation through ideals of deliberative democracy, such as *"changing the rules of representation and the ways decisions are made...."* with design characteristics as 'deliberate choices' that recognise differences in positionality, status, and knowledge; strategies to allow participants to engage in reframing debate, or that *"allow them to articulate their own perspectives and experiences"*; and popular mobilisation, which, following from the feminist movement allows participants to reframe and define for themselves their own scope for agency and that this can be achieved through strategies such as popular education, assertiveness training, building argumentation skills, informing people about their rights and about the policies that they are being consulted about, or mobilizing to put on pressure from 'outside' (2004:85–87).

In the above discussions, we have seen that a starting point in water governance and management would be the recognition of poor, disadvantaged or marginalised women, men and other groups' access to water resources; their representation in local water institutions; effective participation in decision-making; and their power and knowledge at different levels, as well as the related patterns of exclusion and inclusion. Assessing the transformatory potential of water governance institutions in particular contexts and time should consider efforts made to ensure that both men and women participate in the institutions, engage in and redirect debates, and whether their voices are heard and respected, as expounded in Sections 3.6 and 3.7 and Chapter Seven with regard to evidence from Makondo Parish. The subsequent section examines democracy, inclusion and gender.

3.6 Democracy, Inclusion and Gender

3.6.1 Gender and Democracy

Democracy is now part and parcel of development, and is often seen as inseparable from good governance (e.g., White 1996:6), and, of course participation (Brown 2004; Hickey and Mohan 2004:19). This is chiefly because democracy allows individuals to talk about or confront issues or to make claims and demands from privileged or powerful people. Iris Marion Young acknowledges that democratic or political systems give all members in society an opportunity to influence public policy to serve or protect their interests, and are *"the best means for changing conditions of injustice"* (2000:17). Thus, participatory processes must also be as democratic and inclusive as possible, and understanding this requires reviewing the works of some democratic theorists. One of these is Chantal Mouffe (1996), who discusses the linkages between democracy, power and politics. Commenting on the nature of pluralistic processes and how they seek to find consensus and agreement, Mouffe suggests that if exclusion is to be avoided, these processes should recognise difference (including gender) and minimise unanimity and homogeneity. Mouffe also provides some insights on how power should be exercised in pluralist societies and policy fora. She notes that:

> *To deny the need for a construction of collective identities and to conceive democratic politics exclusively in terms of a struggle of a multiplicity of interest groups or of minorities for the assertion of their rights is to remain blind to the relations of power. It is to ignore the limits imposed on the extension of the sphere of rights by the fact that some existing rights have been constructed on the very exclusion or the subordination of others.*
>
> (1996: 247)

Explaining more on power and democracy in pluralist democratic societies, Mouffe calls for a need to constitute forms of power that are compatible with democratic values (1996: 248), and adds that modern pluralist democratic societies and spaces entail conflict and confrontation, and attempts to negate or subvert them through consensus results in the subordination of some groups, including women. Elaborating on the principles of deliberative democracy and the essence of ideals of inclusion, political equality and reasonableness, Iris Marion Young asserts that whether face-to-face or based on agreement as to forms of communication, deliberative processes should allow what she terms 'differentiated social segments', such as women and

marginalised groups to struggle and engage with one another, through, for example inclusive representation. She argues that:

> *...a democratic decision is normatively legitimate only if all those affected by it are included in the process of discussion and decision-making. This...opens many questions about the way in which they are affected, and how strongly...everyone affected by decisions in any trivial way ought to be party to them...'affected' here means at least that decisions and policies significantly condition a person's options for action. As an ideal, inclusion embodies a norm of moral respect. Persons (and perhaps other creatures) are being treated as means if they are expected to abide by rules or adjust their actions according to decisions from where determination of their voice and interests have been excluded. When coupled with norms of political equality, inclusion allows for maximum expression of interests, opinions and perspectives relevant to the problems or issues for which a public seeks solutions.*
>
> (2000:23)

Young goes on to assert that democracy is attained when *"all significantly affected by the problems and their solutions are included in the discussion and decision making on the basis of equality and non-domination"* (2000:29). This brings us to the question of inclusion and exclusion, or voices and interests, or 'who participates and who benefits' in development (Cornwall 2003:328), in which essentialist notions disadvantage women. The importance of gender in securing voice and participation in decision-making processes has been further emphasized by Cornwall. She explains that:

> *...bringing a gender perspective to bear on the practice of participation in development may assist in identifying strategies for amplifying voice and access to decision-making of those who tend to be marginalised or excluded by mainstream development initiatives.*
>
> (2003:1325)

In relation to the above ideas, participation in natural resource governance is often characterised as 'community-based' with management systems that vest decision-making power in local institutions that emphasise the sufficient participation of the local people and local organisations for more legitimacy and accountability (Fabricius and Collins 2007; Leach and Mearns 1999; Nuggehalli and Prokopy 2009). For example, Dryzek (1997) posits that transformative participation in natural resource management occurs when actors adopt what he calls an 'ethno-

centric ideology'[17] in which social, economic, ecological and political dimensions are taken into account, as well as recognising the diversity of people based on subjectivities such as gender and social class. It is also argued that such an approach considers the role of gender in human-natural resource relationships (Agarwal 1997b; Ahmed 2001; Buchy 2006) and recognises the institutional and structural power relations and differences between various actors at different levels (e.g., Ahmed 2001; Sodhi, Davidar, and Rao 2010).

Thus, understanding how women, men and marginalised groups participate or benefit from development resonates with more inclusive forms of participation, such as (effective) representation and transformation.

3.6.2 Gender and Representation

As we saw in Chapter Two, representation takes into account the physical presence and membership of individuals (men, women or marginalised groups) in a given institution and fora, and their ability to have influence in terms of their opinions in public fora (Fung 2006; Franks and Cleaver 2007:301). Various theorists have also argued that the representation of disadvantaged groups in decision-making in development and natural resource management groups occurs through being members in the groups or committees, attending committee meetings, and being heard in these meetings (e.g., Agarwal 1997; Cleaver 1999; Cornwall 2003). Commenting on the exclusion of women in forest management, Cornwall contends that women's presence on committees goes with *"their ability to represent women's interests, whether they raise their voices and whether any one listens"* (2003:1329). The underlying principle here is women and men often speak in different voices as activists by bringing different sets of issues and concerns to their participation (e.g., Schlozman *et al.* 1995; Haque 2000).

In her later work, Cornwall warns that an individual's ability to be involved (or physically present) in an activity does not mean that they will have a voice, or that their ideas and needs will be addressed (2008:278). Similarly, women's physical presence or formal membership in project or development management meetings does not guarantee that they have a real say; it only acts

[17] which focuses on human beings as the centre of natural resource management, with policies and processes oriented for people, unlike the environment-focused "eco-centric ideology"

as a 'mechanism' for participation that could be observed, but whose content is difficult to assess (White 1996). White suggests that it is through inviting local people to form their own groups, develop by laws or even draw up plans for what they would do that representative participation allows the poor or disadvantaged to have a voice in development projects. On this, Fung (2006) further posits that representative participation should question who is allowed to participate, whether they are representative of the population (or group in question) and the method of communication or decision-making.

Hence, it is clear that assessing the effective representation of poor women and men requires examining three key aspects: their membership in institutions; their physical presence in decision-making processes; and their ability to raise their opinions or voices, as investigated in Chapter Seven. I now explore aspects of transformative participation.

3.6.3 Gender, Decision Making and Options for Transformation

As observed in Chapter Two, the ability to have voice is associated with the work of theorists such as White (1996), Hickey and Mohan (2004) and Cornwall (2003, 2004). On transformative participation, White argues that:

> *The idea of participation as empowerment is that the practical experience of being involved in considering options, making decisions, and taking collective action to fight injustice is itself transformative. It leads on to greater consciousness of what makes and keeps people poor and greater confidence in their ability to make a difference.*
>
> (1996:8-9)

The issue of voice and options is further explained by Andrea Cornwall from a gender perspective. Cornwall draws our attention to the relevance of combining voice, choice and agency in order to transform power relations between men and women in participatory development. She asserts that:

> *...what is needed are strategies and tactics that take account of the power effects of difference, combining advocacy to level open spaces for voice with processes that enable people* [men and women] *to recognise and use their agency.*
>
> (2003:1338)

Hence, from the above discussions, analysing the transformative potential of participation for marginalised groups requires examining whether participatory spaces facilitate group participation; how the marginalised engage in debate, through for example their voices and choices; and their agency or influence over political processes and agendas. Related to water governance, this would entail recognising the voices, choices and agency of poor women and men in developing communities, as explicated in Chapter Seven. We now turn to the linkages between potentially transformative spaces in local water governance structures and institutions in the context of the study area.

3.7 Relationship with Social Structures and Processes in Makondo Parish

3.7.1 Inclusion and Decision-Making in Water Governance

A starting point in understanding how the themes discussed in Section 3.6 relate to this study is analysing how they relate to access to water and participation in water governance. As we saw in Chapter Two, water governance is a product of social and political contestation and bargaining between different actors, and the participation of stakeholders in structures that govern local access, allocation, development and management of water resources is a crucial element of pro-poor water governance (e.g., Plummer and Slaymaker 2007:4,16). Linden (2005) goes on to state that participation enables 'understanding from below' by considering the interests and needs of different groups, which requires taking into account socio-cultural differences between women and men.

Basing on a local institutional analysis of water governance in India, Nandita Singh contends that all decisions regarding planning, design, location, operation and maintenance, management and assessment of water should be based upon the recognition of [gender] differences (2008:926). Singh continues that areas such as the choice of technology, siting and management decisions represent sources of decision-making powers that ought to be examined, yet these depend on how spaces for voice, choice and agency are made. Rogers and Hall (2003) point out that the voices of the disadvantaged should be listened to and respected in water-related decision-making. They contend that:

> *...given the complexities of water use within a society, developing, allocating and managing it equitably and efficiently and ensuring environmental sustainability requires that the disparate voices are heard*

> *and respected in decisions over common waters and use of scarce financial and human resources.*
>
> (2003:16)

Thus, it is through ensuring that the interests and voices of 'disparate' men and women are addressed and respected in water-related decisions that participation has the potential to ensure equality in water rights, roles and partnerships, and can even 'empower' rural communities (CAPNET and GWA 2006). A gender perspective in participation constitutes a 'multidimensional construct' and can lead to the identification of strategies for amplifying voice and improving access to decision-making for the marginalised (Cornwall 2003:1325; Nuggehalli and Prokopy 2009:289). This again shows the relevance the ability of men and women to give voice to their water needs and concerns (the essence of 'empowerment'), and their capacity for collective action and community development (Singh 2008; Cleaver and Hamada 2010:29-30).

Understanding the inclusion of women and men in water governance in the developing world requires analysing the decentralised models that call for decision-making at the lowest appropriate levels under the now popular demand-responsive approach. Nandita Singh asserts that this approach has "*well defined institutional strategies for promoting equitable voice and contributions from women through structural forms and processes, democratic decentralisation and constitution of water committees*" (2008:926). More specifically, Singh adds that assessing equitable gender participation in local water governance in developing communities requires analysing the resource management system in the local community context and the participatory strategy adopted within the scope of the development paradigm (2008:932). Uganda and Makondo Parish in particular have similar structures, water resource management institutions (that is WUCs) and participatory strategies as outlined in local policies examined in Chapter Two and Chapters Five, Six, and Seven. We now turn to representation in water governance.

3.7.2 Representation, Voice and Agency in Water Governance

In Section 3.6, we discussed the theoretical basis of the principle of representation with regard to democracy and participation, following the ideas of theorists such as White (1996) and Hickey and Mohan (2004) discussed earlier in Sections 3.5 and 3.6. Similarly, an improved understanding of the contexts in which representation in participatory processes occurs in water governance in various poor communities can offer rich insights (Cleaver *et al.* 2005:29),

especially the gendered roles, practices and outcomes of decision-making and how they determine day-to-day access to water in polycentric systems (Schreiner, Mohapi, and van Koppen 2004), as is the case in Makondo Parish. Of interest here is the less theorised question of who is represented in water-related decision-making, whose voices are heard, and the implications in terms of access to water and the resultant outcomes (Cornwall 2003; Franks and Cleaver 2007).

Commenting on the more active and equitable representation of women in local governance, Nandita Singh argues that women symbolize a marginalized group in society whose lives are *"entrapped in an institutional framework characterised by gross inequalities of formal power and authority in the public sphere"*, and calls for the institutionalisation of equal representation of women and men at all levels and in all fields of decision-making so that the needs of both are equitably met (2008:932). For Cleaver *et al.* (2005), Cleaver and Hamada (2010:30) and Plummer and Slaymaker (2007:19), collective action institutions such as (formal) water management committees exemplify the key decision-making arenas in which the representation – of the voices and choices – of men and women in water governance can be assessed. Thus, as discussed in Chapter Seven, this study uncovers the gendered power differences in representation in WUCs.

More still, some authors contend that more effective and sustainable water governance should transform gender relations by ensuring that women are involved in making decisions and choices on water resources, as well as planning of water projects (e.g., Rydhagen 2002; Panda 2007). This resonates with what Harold Lockwood (2004), in his work on community management of rural water supply calls a community's direct control over strategic decisions and *"a sense of ownership of the infrastructure"* that should target 'the entire community', including marginalised groups (van Koppen *et al.* 2009). Hence, aspects such as pre-construction, selection and establishment of water technologies that are explored in Chapter Seven (Section 7.3) analyse women and men's involvement in the planning of water infrastructure in Makondo Parish. As noted earlier in this sub-section, institutions such as water management committees represent one of the key collective action-related decision-making arenas in water governance (Ebato and van Koppen 2005; Cleaver 2007) and provide platforms or spaces where the voices of the

marginalised can be heard, leading to their empowerment and transformation. On this, Cleaver muses that:

> *The inclusion of women in management roles on water committees and associations is seen to represent a form of female emancipation, representing women's assertion of control over their own lives as well as conveniently ensuring the sustainability of facilities.*
>
> (2004:70)

In sum, it is clear that analysing the gendered politics of access to water and more transformative participation in water governance should examine aspects such as a) water resources; b) water actors/agents; c) institutional arrangements or mechanisms and spaces for water delivery and voice of water users; d) formal 'rules' or policies; e) needs and interests of poor women and men; and f) their voices, choices and their control or direction and agency, so as to bring about desired changes. But how are men, women, boys and girls included in the rather complex and contextual local-level water governance processes and structures in developing communities?

3.8 Conclusion

There seems to be no single theory that illuminates the links between gender and governance, or water governance in particular. Thus, in this Chapter, I have used propositions and theoretical debates from the fields of sociology, political science, and gender and development, and gender and participatory governance to theorise the gendered politics of water governance. I have examined the gendered nature of social institutions, processes and spaces, showing how they are laced with power. I have shown how power is central in society and that it is everywhere, characterised by resistance, disciplinary regimes and knowledge, concepts that can be used to analyse the discourses and conditions that subordinate women or marginalised groups. I have also theorised access to resources and argued that both rights-based and structural and relational mechanisms that take into account individuals abilities and powers can illuminate the gender dynamics of access to water. Regarding participation in water governance, I have examined the theories on transformative modes of participation, mainly representation, voices, discourses and choice. I have looked at how representation of women and men can be effective, particularly their membership and physical presence in decision-making, with reference to WUCs. I have also explored options for marginalised groups' voices and agency and highlighted how they can be used in local water management. It is combinations of these that can transform the power and

abilities of poor women and men individually or collectively, leading to more efficient, equitable and sustainable water governance and management. But can these theories uncover the gendered regimes of water governance in developing communities? This question is answered in Chapters Five to Seven. The next Chapter describes how the study was designed and methods of inquiry used.

Chapter Four: Methodology

4.1 Introduction

This chapter explores the methods employed in this study, describing the approach, inquiry strategy, study area and population, sampling procedures, data collection and analysis methods. The study employed a mixed-method approach, in which a cross-sectional survey was conducted, followed by qualitative methods, mainly in-depth interviews, focus group discussions, community meetings and participant observation. Being a case study, the study area sub-section describes Makondo Parish in detail, including its geographical location. The study participants, who were drawn from the lowest to the highest socio-economic levels in the study area, are also described, including how and why they were selected. The chapter goes ahead to explain the 'forms of evidence' used for both primary and secondary data collection, and how feminist approaches were incorporated in the primary methods at different stages of the study. Aspects of reflexivity, validity and reliability that were taken into account are described, the merits and drawbacks that were experienced, and how these drawbacks were handled. The procedural and micro ethical considerations that were taken into account are also explained. The chapter concludes by illustrating the limitations encountered in the study.

4.2 Study Design

This study was based on a mixed-method approach, that is increasingly being used today in social and human sciences (Tashakkori and Teddlie 2003; Johnson and Onwuegbuzie 2004). This approach relies on a combination of quantitative and qualitative research methods and is espoused by the compatibility thesis and the philosophy of pragmatism. Pragmatism posits that different approaches or methods can be used as long as they work best in a real world situation (e.g., Sleeper 2001), and that many approaches can be used to collect and analyse data rather than subscribing to one way - whether quantitative or qualitative. Thus, my ontological position here is that the use of both qualitative and quantitative data provides the best understanding of a research problem and produces more complete knowledge necessary to inform theory and practice (Creswell 2003:12; Johnson and Onwuegbuzie 2004:21). Essentially, social reality is constructed in different ways and in different contexts (Silverman 2006:9), hence, using a variety

of methods was necessary in order to uncover the various ways through which gender manifests itself in water governance at different social and geo-political levels.

The mixed method approach I employed was based on a variety of qualitative methods that followed the quantitative cross-sectional survey, the latter providing data that formed a basis for a more in-depth investigation. Considering the three general strategies of inquiry in mixed method research (that is concurrent, sequential and transformative procedures, e.g., Creswell 2003; Tashakkori and Teddlie 2003), this study employed the sequential model because of its gender sensitivity. The sequential model expands the findings of one method (whether quantitative or qualitative) with another method. Hence, I used the methods sequentially, starting with the survey, followed by qualitative methods, each following the other and informing the subsequent phases while 'testing hypotheses' (Hesse-Biber and Leavy 2007). The hypotheses were tested through informing the subsequent participants about the findings of the previous phase and obtaining their views about them, as explicated in the next sub-section and Section 4.6. This was very useful when interviewing the Village, Parish, District and National Key Informants (KIs), as it stimulated deeper descriptions and explanations on the gender status quo with regard to water.

4.2.1 The Sequential Mixed Methods Strategy

The sequential strategy of inquiry enabled me to incorporate three key aspects for understanding the research problem: deduction (testing of theories and hypotheses); induction (discovery of patterns) and abduction (set of explanations for understanding results) - de Waal (2001) and Schutt (2006). The discovery of patterns and sets of explanations was made possible by the qualitative methods that mainly constituted the second, third and fifth stages of the study (see the next sub-section), in which I got the specific views and voices of male and female participants at individual and group levels. I followed the sequential typical strategy of inquiry or 'scenario of research' suggested by Creswell, who states that:

> *...the study begins with a broad survey in order to generalise results to a population and then focuses, in a second phase, on detailed qualitative, open-ended interviews to collect detailed views from participants.*
>
> (2003:21)

Hence, the stages of the study involved a survey and qualitative investigations as expounded below.

4.2.3 Stages of the Study

This study was done in five stages, which are described below:

- Stage I: Identification and examination of theories, concepts and literature on study themes, in which documentary and archival information on gender and rural water governance in Uganda, Africa and globally was consulted. After this, reconnaissance visits were undertaken in the study area so as to build trust, as detailed in Section 4.9. This was followed by a cross-sectional survey of all the 15 villages in Makondo Parish, which enabled me to 'analytically generalise' my results (e.g., Yin 1994; Creswell and Clark 2007). After the survey, four villages were identified for the qualitative investigations[18] and these are later referred to as 'case study villages'. The preliminary findings of the survey also helped me to 'sharpen' or revise the qualitative instruments in preparation for the subsequent phases;
- Stage II: This stage involved in-depth interviews with Village and Parish Key Informants, who enabled me to gain a deeper understanding of the social aspects of water at micro contextual levels. These interviews also provided information that helped in revising the focus group guides and identifying more issues for investigation in the fourth and fifth stages of the study;
- Stage III: This phase involved conducting focus group interviews with male and female water users in each of the four case study villages in Makondo Parish, as explained in Section 4.6;
- Stage IV: Here, participant observation (PO) sessions were conducted around water points in Makondo Parish, with the aim of observing the gender roles and mechanisms of access to water described by survey respondents, Village/Parish Key Informants and focus group participants. The participant observation sessions were carried out together with community meetings with water users, and both provided a means of testing

[18] based on a variety of factors as explicated in Section 4.5

hypotheses and obtaining detailed accounts of men and women's access to water and participation in water management;

- Stage V: This was the final stage of the study. It involved in-depth interviews with Key Informants at District and National levels, with whom I also shared some insights from the four stages described above.

It is argued that one of the major decisions in the selection of mixed-method strategies is the incorporation of gendered or feminist perspectives (Creswell 2003). Thus, given the 'gendered' nature of this study, I incorporated feminist or 'woman-centred' approaches (e.g., Byrne and Lentin 2000; Hesse-Biber and Leavy 2007) into the different methods and techniques indicated in the study stages. As noted by Byrne and Lentin, feminist research methodologies *"can reveal the gender problematic through prioritising women's lived experiences of the social, telling this experience in their own voice"* (2000:7). Feminist approaches are also intellectually alert and sensitive to what women and disadvantaged groups want to know or have to say (Harding and Norberg 2005:3; Oakley 1998); this approach was for example used to understand the transformative potential of water spaces in Makondo Parish, as demonstrated in Chapter Seven. On the other hand, gender analysis methods such as the *Activity Clock* and *Access and Control Profile* that were used in the focus groups helped in identifying, and understanding inequities based on gender (Reinharz 1992; Moser 1993). A feminist or gender approach was also used in this study because rural water is a development issue and women are important contributors to development processes, which affect them (and men) in different ways (e.g, Boserup 1970; Kabeer 1994; Mukhopadhyay 1995; Donahoe 1999).

More still, the survey's main objective was to reveal the 'water lives' of men and women, while in-depth interviews, focus group discussions, participant observation procedures and community meetings provided more 'contemporary' sources of evidence (Crewell and Clark 2007; Denzin and Lincoln 2005; Hesse-Biber and Leavy 2007). The successful execution of the five phases of the study largely depended on the protocol that was developed prior to the field work, adherence to the work plan with some in-built flexibility, the participants' collaboration and available resources for exploring the study area.

4.3 Study Area and Rationale

Makondo Parish was purposively chosen as a single case study, with the knowledge that particular social, political or other contexts are important in understanding the social world (Creswell 2003). Yin (1994) builds on the aspect of context by pointing out that:

> *Case studies emphasize detailed contextual analysis of a limited number of events or real life conditions or situations that act as a basis for the application of ideas, and are appropriate when the boundaries between phenomenon and context are not clearly evident.*

As noted earlier in Chapter One (Section 1.2), there is limited research on the gendered politics of water governance in poor rural communities, and Makondo Parish's environment was ideal for this study. Geographically, the Parish is found in rural Lwengo District, a new district that was carved out of the former Masaka District in Uganda, a country in East Africa, south of the Sahara (Figure 4.3a). The Parish is located about 64km from Masaka town and 194km from Kampala city, Uganda's capital. Makondo is one of the four parishes in Ndagwe Sub County, Lwengo District in South Central Uganda, the others being Ndagwe, Mpumudde and Nanywa (Figure 4.3b). The Parish has 15 villages or local council (LC) 1's, which include Makondo, Michunda, Misaana, Kyamukama, Luyiiyi Kaate, Luyiiyi Potazi, Kiyumbakimu, Kiganjo, Kiteredde, Kayunga, Kibuye, Misenyi, Kijjajjasi, Kanyogoga and Wajjinja (Figure 4.3c).

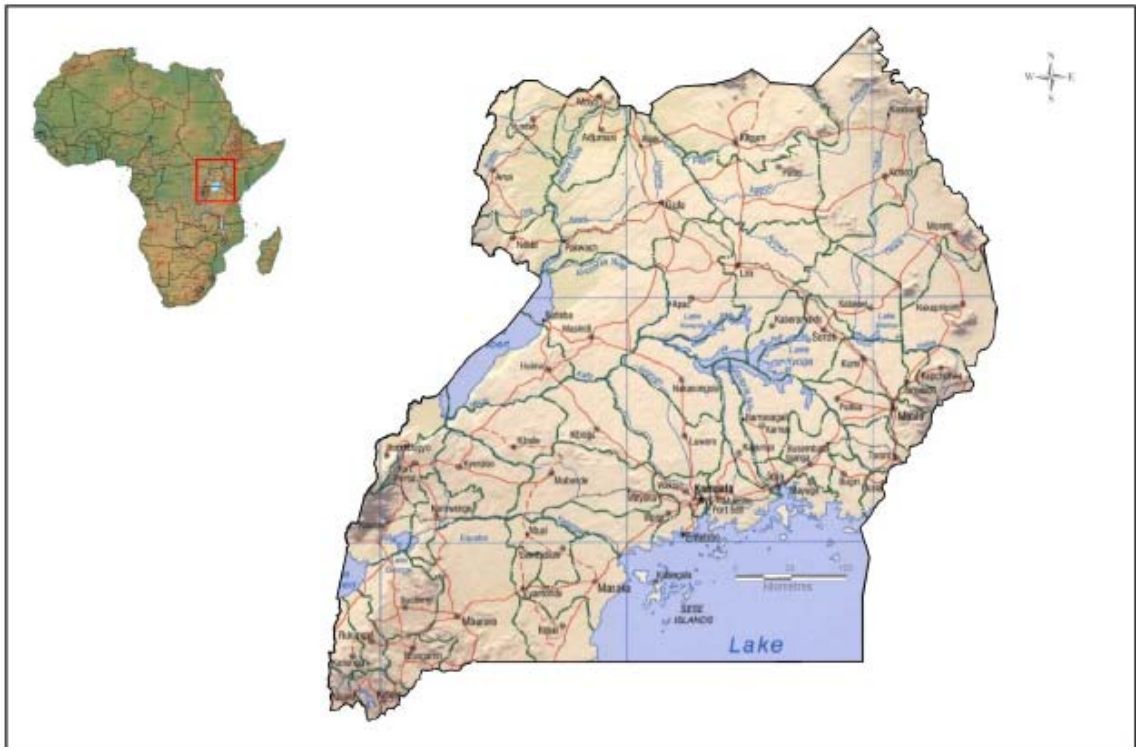

Figure 4.3a. Map Showing the Location of Uganda on the African Continent (Source: Macri *et al.* 2012/WIL)

Makondo Parish has 1,726 households (Field Data 2011) and a population of about 8,193 people, of which 51.4% are females (UBOS 2006b; Ndagwe Sub County Local Government 2011). The ethnic groups in the area are the Baganda (the majority), the Banyarwanda, the Banyankole, the Barundi, Tanzanians and a few minorities such Banyoro, many of whom derive their livelihoods from crop and livestock farming and small trading. The major crops grown in the Parish are matooke (plantain bananas), sweet potatoes, beans, maize, groundnuts, sorghum and millet; while cattle, goats and chicken are the major livestock kept. The parish is located in an area that receives two rainy seasons (March-May and September-November) and two dry spells (January-February and June-August), with an annual average rainfall of 950mm per annum (NEMA 2008). Due to climate-change related causes, the seasons and rainfall amounts are changing, and because the parish is located in Ndagwe Sub County, which is partly covered by the natural disaster and drought-prone cattle corridor, it experiences long droughts and erratic rainfall (NEMA 2004; 2008). The cattle corridor covers the western or cattle Ankole sub-region, and districts such as Sembabule, Luweero, Nakaseke, Nakasongola, Mubende, Kiboga, Rakai, and

Lwengo among others, and is also characterised by declining crop and animal productivity due to its fragile environment.

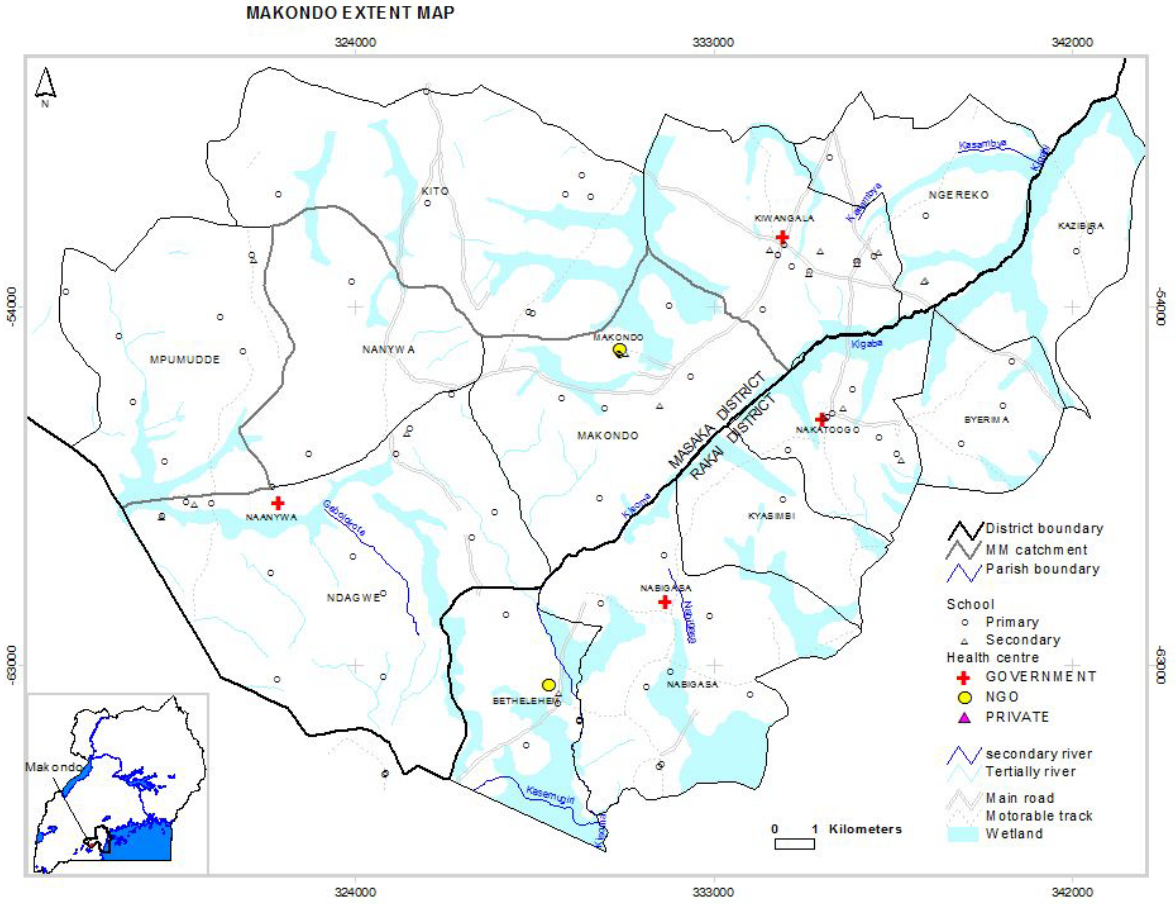

Figure 4.3b. A Map of Makondo and its Neighbouring Parishes (Source: Macri *et al.* 2012/WIL)

This scenario is partly responsible for the poor access to clean water in the area, with the current safe water coverage standing at 58% in Ndagwe Sub County, which is lower than the 61% coverage for the whole of Lwengo District (Lwengo District Local Government 2011). At the start of this study in January 2011, most of the "improved" water sources in Makondo Parish were not functioning, a fact that we shall establish further in Chapter Five, Section 5.3. Also, there was no piped water in the Parish. Fortunately, about five of the 15 villages in the Parish had electricity, including the Guest House where I resided, although this power was unstable and its high cost made it unaffordable for most of the people in the area. There was one Health Centre in the Parish (situated in Micunda village, see Figure 4.3c) constructed by the Medical Missionaries

of Mary (MMM), under their Community-Based Health Care Programme, but which provided health services to people from the whole of Ndagwe Sub County and beyond.

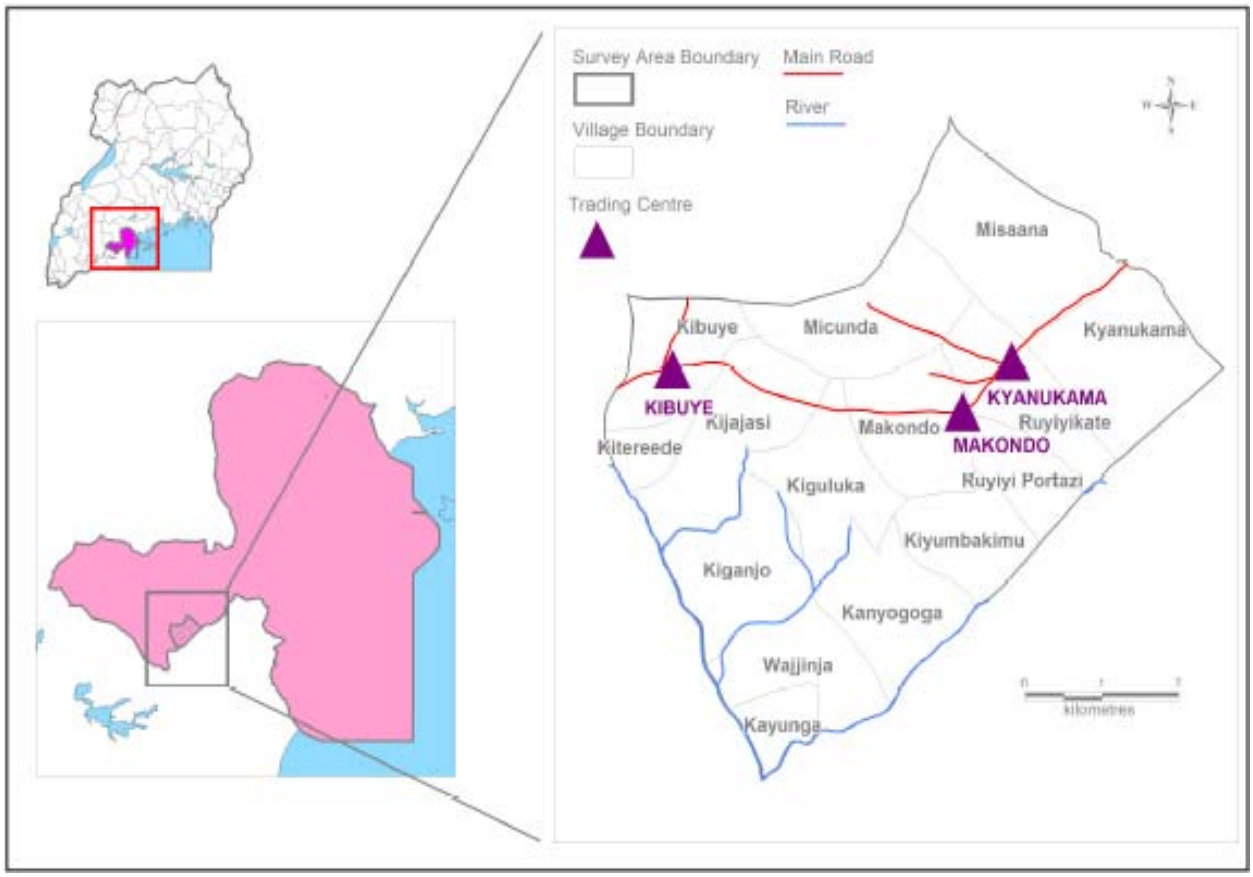

Figure 4.3c. Map Showing the Location of Makondo Parish within Lwengo District and its Villages (Source: Macri *et al.* 2012/WIL)

Thus, Makondo Parish was a suitable study area because of its typical rural setting faced with water scarcity and numerous social challenges in water governance, including gender. Also, the Parish is located in an area that was more accessible, which made it relatively less expensive and more convenient to conduct the study. Thirdly, as described in Section 4.2, this study was both exploratory and explanatory. It was exploratory in the sense that the survey answered the 'what', 'who' and 'where' questions basing on the literature review and the various propositions and theories on gender and rural water governance. The rationale for taking this step is echoed by Yin:

> *...the simple goal is to have a sufficient blueprint for your study, and this requires theoretical propositions. Then, the complete research design will provide surprisingly strong guidance in determining what data to collect and the strategies for analysing the data. For this reason, theory development prior to the collection of any case study data is an essential step in doing case studies.*
>
> (1994:28)

On the other hand, the explanatory nature of this study involved questions of 'how' or 'why', and these were investigated after the survey in an unmanipulatable contemporary real-life context (Yin 1994:1), as explained in stages II-V in Section 4.2. Makondo Parish therefore had the 'contemporary phenomena', such as individual, organisational, social and administrative or political structures and settings at different levels in which the processes under study were presumed to occur (Denzin and Lincoln 1994:202), at least with regard to gender and water governance for a typical rural area.

4.4 Study population

The study participants included agents or actors from the different geo-political and socio-political levels of governance, mainly local and national (see appendix D). At the national level for example, officials from the Ministries of Gender, Labour and Social Development (MGLSD), Water and Environment (MWE) and Directorate of Water Development (DWD) were interviewed. MGLSD for example was formed in 1998 as a merger of two ministries: the Ministry of Labour and Social Welfare and the Ministry of Community Development. The formation of MGLSD followed the Uganda government's recognition that gender equality and women's empowerment are crucial to the country's social progress, economic growth and sustainable development, and this encompasses access to water or water development. Also, individuals representing key Civil Society Organisations (CSOs) particularly NGOs operating at the national level, who are recognised as major stakeholders in the rural water sector (e.g., GOU 1999; 2007; 2009c), were interviewed. At the district level, an official from Lwengo District was interviewed (out of the three originally targeted), with a view to eliciting his understanding of the gender issues in Makondo Parish and the entire District. Another individual representing MMMs, who operate in the Parish and District was also interviewed. At the lower community level, the participants were taken from Makondo Parish itself (two, the Parish Chief and the Parish Development Committee Chairperson), and Ndagwe Sub County (Sub County Chairperson, Sub

County Chief, and Sub County Health Officer), as indicated in appendix D. Within the villages in Makondo, members of WUCs and Village Chairpersons (including all four from the case study villages), and local citizens or male and female water users as the major respondents to the survey were interviewed. At this point, it is important to discuss the characteristics of the survey participants, who were sampled, and the data analysed as described later on in Sections 4.5 and 4.7. Overall, there were 602 survey respondents (Table 4.4).

Table 4.4. Selected Socio-demographic Characteristics of the Survey Respondents (n = 602)

Characteristic		**Frequency or Mean**
Respondents	Female	380 (63%)
	Male	222 (37%)
Household type	Female-headed (*de jur*)	175 (29.1%)
	Female-headed (*de facto*)	203 (33.7%)
	Male-headed	217 (36%)
	Child-headed (male)	4 (0.7%)
	Child-headed (female)	3 (0.5%)
Age	≤ 18	7 (1.2%)
	19 – 24	54 (8.9%)
	25 –34	131 (21.7%)
	35 –44	152 (25.2%)
	45 –54	110 (18.3%)
	55 –64	99 (16.4%)
	≥ 65	49 (8.1%)
Marital status(h/h heads)	Married	361 (60.0%)
	Cohabiting	6 (1.0%)
	Widowed	110 (18.3%)
	Widower	8 (1.3%)
	Divorced/Separated	68 (11.3%)
	Single/not yet married	49 (8.1%)
Education level	None	123 (20.4%)
	Primary	409 (67.9%)
	Secondary (O Level) Secondary(A	56 (9.3%)
	Level)	12 (2.0%)
	Diploma	1 (0.2%)
	Degree	1 (0.2%)
Main Occupation	Crop Farmer/Peasant	440 (73.1%)
	Mixed Farmer	96 (15.9%)
	Livestock Farmer	9 (1.5%)
	Self-employed	16 (2.7%)
	House Wife	14 (2.3%)
	Salaried Worker	6 (1.0%)
	Casual Labourer	6 (1.0%)
	Student	7 (1.2%)
	Others	8 (1.4%)
Ethnicity/Tribe	Baganda	429 (71.3%)
	Banyarwanda	71 (11.8%)
	Banyankole	47 (7.8%)
	Barundi	33 (5.5%)
	Tanzanians	16 (2.7%)
	Banyoro	2 (0.3%)
	Bakiga	4 (0.7%)

Source*: Field findings, August – December 2011*

Of the 602 survey respondents, 63 percent were women, reasons being that more women were found in the households due to cultural norms that limited their mobility compared to the men, while some were widows. A few men also declined to be interviewed, saying their wives were better placed to explain water issues. For example, a man from Makondo village said: *"I understand what you need now. Let me call my wife to answer you…. she is the one who collects water"*. This was an early indication of the household gender norms regarding the division of labour in water provision and management and its implications on access.

Most of the survey respondents were from typically rural households. Forty seven percent represented households along major village roads but not in the trading centres; 39 percent were from households located completely off the roads, while only 14 percent were in trading centres. Almost half of the female respondents belonged to households located along major village roads but not in the trading centres, while the largest number of males (44.6%) was from off-road households. There was a significant relationship between the four villages selected for qualitative inquiry (case study villages) and the location of their survey respondents, $\chi 2$ (8, N=21) = 74.36, p <0.01, with Kibuye Village having a bigger number of respondents located within a trading centre (66.1%) because of its strategic location along the major road to Ndagwe Sub County, while Misaana village recorded the highest number of households that were completely off road (32.1%), possibly due to its size and general location away from the major roads.

As shown in Table 4.4., thirty-six percent of the respondents were from male headed households, followed by households headed by women in the absence of their living partners (female headed *de facto*, 33.7%) and separated women, widows or widowed households (female headed *de jur*, 29.1%). Only seven households were headed by children, three of which were female children. Most of the rural households in Uganda are also male-headed, while the HIV/AIDS scourge, civil war in parts of Northern Uganda and other poverty-related problems explain the existence of female and child-headed households in the country (GOU 2008a; UBOS 2006b). Also, the majority of the respondents were from large-sized households (with 6-10 household members, 43.9%), followed by medium-sized households (4-5 members, 27.1%), and only 5% had one occupant. Thus, the actual household size of the majority of the respondents in Makondo Parish was higher than Uganda's national average of 4.7, and the 4.2 for the central region of the

country, where Makondo Parish is found (UBOS 2005:21). Most households had between 6-10 members because of the high number of extended families in most villages in Makondo Parish, many of which had many of children or dependants. This means that the dependency rate in the Parish could be high.

About 25 percent of the respondents were aged between 35-44, followed by those aged 25-34; there were an almost equal number of male and female respondents in both age categories (25.2% and 25.3% respectively). The same age categories dominated the number of respondents from three of villages selected for qualitative investigations (Makondo, Kanyogoga and Kibuye). Only 1.2 percent of the survey respondents were teenagers aged 18 and below (representing the child household heads), whilst the *de jur* female headed households recorded the highest number of respondents by age category (52.7%, all of advanced age). Most of the male respondents were the household heads themselves (92%), while 53.4 percent of the females were *de facto* household heads and another 43.4 percent *de jur* household heads.

Sixty percent of the respondents were married, 18.3 percent widowed and 11.3 percent were either divorced or separated. Of those that were married, 75.2 percent were males, while widows made up 28.9 percent of the female respondents alone. Even though the majority of respondents were married, some were said to be in polygamous relationships. Looking at education level, 67.9 percent of all the respondents had attained some primary education; about 20% had not attended school at any one time in their lives, of which the majority (24.5%) were females the majority (56.9%) from *de jur* female-headed households (FHHs). Thus, it appears that women in Makondo Parish were generally less educated than the men, and this was attributed to socio-economic obstacles, such as cultural norms that do not prioritise the education of girl children, early marriages and customs that confine women at home, as discovered in the focus group discussions (Chapter Four, Section 4.6).

As for the main occupations of the respondents, the majority (73.1%) were typically crop farmers; 2.3 percent were housewives, while about 1.5 percent were predominantly animal farmers or cattle keepers, a group that is sometimes sidelined in development due to their pastoral or nomadic lifestyle that keeps them moving from one place to another looking for water and

pasture for their animals, as discussed in Chapter Two. Predictably, 85 percent of the respondents that had no education were the peasants, who also dominated primary-level education, many being school drop-outs. Although some respondents may not have revealed their true monthly incomes (due to fear of government using them in future for the rumoured reinstatement of graduated tax, among other reasons), their occupations corresponded with the major sources of household income, that is crop and mixed farming (61.6% and 19.6% respectively). Because of their over-reliance on farming, the communities had low incomes, with 52.8 percent of the households earning an estimated monthly revenue of UGX 10,000-50,000 (€3-15). The *de jur* FHHs and three of the seven child-headed households earned the lowest income of UGX 10,000 (€3) or less per month (45.2%), indicating that these households could be the poorest in Makondo Parish.

Ethnicity determines social cohesion, identity and cooperation, which is critical for development in Uganda (UBOS 2005; 2006b:21). The survey respondents belonged to seven ethnic groups, of which the Baganda were the largest (71.3%), followed by the Banyarwanda (originally from Rwanda, 11.8%), Banyankole (7.8%) and the Barundi (originally from Burundi, 5.5%). This was typical, since the Baganda and Banyankole are the two largest ethnic groups in Uganda occupying the central and western regions of the country respectively (UBOS 2005:41). Discussions with some of the survey respondents and village Key Informants revealed that the Banyarwanda and Barundi migrated from their original countries in the late 1950s[19].

On religion, which is not indicated in Table 4.4, 58.5 percent of the respondents were Roman Catholics, followed by Muslims (21.6%), Anglicans (also locally known as Protestants, 14%) and Pentecostals (5.6%). Two of the respondents were traditional believers, and one of them, a man, was a known witch doctor from Wajjinja village. The majority of the male and female respondents were also Catholics (61.3% and 56.8% respectively), and there was a slightly larger number of respondents from *de jur* FHHs who were Pentecostal (38.2% vs. 32.4% for the

[19] Banyarwanda came as workers of the Baganda, but because their masters gave them free land, they settled and invited a number of their relatives from Rwanda and Burundi to join them. They have now intermarried with the Baganda.

MHHs). Roman Catholics were also the most dominant across the seven ethnic groups in the study area, as is the case in most parts of Uganda (e.g., UBOS 2005).

The above socio-demographic characteristics of the survey respondents (together with the participants in qualitative interviews/observations discussed in more detail in Section 4.6) provided a good starting point for further analysis of the gender dynamics of access and participation in water governance in Makondo Parish. The next section describes how the study respondents and participants were selected.

4.5 Sample Selection

In this study, different types of sampling were used depending on the study stages and methods of inquiry. Prior to the survey, an up-to-date list of all the households (as key social units and dominant units of analysis and intervention in the water sector – Ray 2007:426) in Makondo Parish was obtained from the Village Chairpersons. These were totalled up to make 1,726 households (Field Data 2011), which then acted as the sampling frame from which we (I, another WIL Doctoral researcher and senior WIL researchers) loosely categorised or stratified the households by sex and age of the household head (that is, adult male, adult female and child-headed). Taking into account the costs and the fewer number of female and child-headed households in Makondo Parish, we settled for a target or representative sample (Fink 1995:49; Schutt 2004:134) of 600 households, which represented about 35% of the total households in Makondo Parish. To get this sample, we first calculated a sample that would be proportionate to the total number of households in Makondo Parish, using Yamane's formula below:

$$n = \frac{N}{1 + N\left(e^2\right)}$$

Where,
e=0.05 (5%) is the desired 95% level of precision
N is the estimated total number of households in Makondo Parish
n is the sample size of households to be selected for interviews (Yamane 1967).

From this formula, the proportionate number of households in Makondo Parish that would be selected for the structured household interviews was estimated as below:

$$n = \frac{1726}{1 + 1726\left(0.05*0.05\right)} \cong 325$$

n = 325 + 0.05*325 = 325 + 16 (5% were added to cater for sampling error)

Therefore, a minimum of 341 households was enough for the interviews, but in order to improve accuracy, we added another 259 households to make it 600 households. The sample size was systematically and proportionately distributed (every one in three of the households) according to the number of households per village, taking into account the female and child headed households because of their vulnerability (e.g., Kabeer 1994; Fisher 2010) and their limited number. After the data was cleaned, the sample comprised of 175 female headed households, 420 male-headed households and 7 child-headed households, totalling up to 602 households. Of these, 380 (63%) of the respondents were females (Table 4.5).

Table 4.5. Number of Respondents and Participants Interviewed in the Study

No.	Method	Respondents/Participants			Response Rate (Percent)
		Males	Females	Total (original target)	
1	Household Survey	222	380	602 (600)	100.3
2	Key Informant Interviews	18	7	25 (35)	71.0
3	Focus Group Discussions	47	52	99 (132)	75.0
4	Participant Observation	60*	70**	130***	-
5	Community Meetings	96	95	191***	-

Source*: Field findings, August—December 2011*; *of which 47 or 78 percent were boy children; **of which 38 or 54 percent were girl children; ***had no specific target or number

In order to have a more in-depth understanding of the gender and water governance issues in Makondo Parish, the in-depth interviews, focus group discussions, observation sessions and community meetings were mainly done in only four purposively selected villages: Kanyogoga, Kibuye, Misaana, and Makondo (although one of the community meetings was done in Kiganjo village), hereafter referred to as 'case study villages'. These villages were selected based on natural, technological (functioning and malfunctioning "improved" water sources), geo-political (e.g., location in relation to geographical coverage of the parish as shown in Figure 4.3c) and social factors, such as household population and existing water institutions or WUCs. For example, Makondo, Kibuye and Misaana in that order had the highest number of households in the Parish.

The focus group discussion and key informant interview participants were also selected purposively as is the norm in most in-depth interviews (e.g., Schutt 2004; Neuman 2003). They were selected at village, Sub County and District levels, depending on their knowledge, capacities, portfolios and stakeholder/agency status in water management. For example, the 12 participants in every water users' focus group were randomly selected from male and female headed households that composed a particular water user group for purposes of 'homogeneity' (Barbour and Kitzinger 1999; Sim 1998; Wilkinson 1998). This was done by selecting six water users from male-headed households and another six from female headed households (depending on whether it was a female or male FGD). The focus groups with WUCs involved all the members of that particular committee irrespective of their number or sex, and these were less than 10 in all the cases. Eventually, a total of 15 focus group discussions were conducted at village level, 11 with water users or members of water user groups and 4 with WUC members. There was a slightly less number of focus group participants than those originally targeted. The FGD participants themselves alleged that the individuals who did not turn up were occupied with household chores (especially for the women), while most men had either travelled or had 'more pressing' activities related to work or income-generating activities. As a result, out of the targeted 132 water users (of which 66 were meant to be males and 66 females), I managed to get 99 participants (52 females and 47 males), hence a turn up of 75 percent. As illustrated in Table 4.5, 25 people constituted the Key Informants, of whom 28 percent were women (although my original target was 35). The participants to the participant observation sessions were selected randomly in the course of the observations from three "improved" and three "unimproved" water sources in three villages (Kibuye, Misaana, and Makondo). The observation sessions were conducted at different times spaced out throughout the day, that is at 8am, 11am, 3pm, 5pm and 7pm and involved at least 120 participants or water fetchers, the majority of whom were children and women (Table 4.5), a fact that is in line with the findings discussed in Chapter Six. At least four community meetings were conducted at different times and days during the fourth stage of the study, and were attended by 191 individuals, of whom 50 percent were women. Whereas these figures show that men and women equally attended the meetings, most of the individuals who left the meetings prematurely were men.

4.6 Data Collection Methods

4.6.1 Introduction

Taking into account aspects of complementarity and applicability, this study employed five forms of evidence grouped into two: secondary data (documentation and archival records) and primary data (interviews, PO and community meetings), as expounded below.

4.6.2 Secondary Data

Documentation

Robert Yin posits that documents are helpful in: verifying correct spellings and titles or names of organisations; providing other specific details to corroborate information from other sources; and making inferences from documents so as to get clues worthy of further investigation (1994:81). Thus, in this study, documents such as sector-performance reports from Uganda's Ministry of Water and Environment (e.g., GOU 2008b, 2011); State Of Environment Reports [SOERs] (e.g., NEMA 2004, 2008); research/project proposal reports and development plans for Makondo Parish, Ndagwe Sub County and Masaka District and parts of rural Uganda; and published materials from Uganda and other parts of the developing world were consulted. The Ugandan documents were used to verify and correct names and synonyms used for the various organisations and institutions working on rural water governance at different levels and to substantiate data taken from the entire study, following the research themes and sub-themes. These documents were also used to review literature prior to the survey and to discuss the study findings later on, as indicated in Chapters Five to Seven.

Archival Records

This study used archival records, particularly survey data and maps. The survey data consulted included national census reports and demographic and health surveys, from which some background information on the socio-cultural characteristics of the study area, such as households and population of Makondo Parish were located. Maps were also obtained from Lwengo District and WIL (e.g., Figures 4.3a, b and c). Because the census data was dated[20], the survey provided more up-to-date information on the Parish.

[20] About eight years old before field work activities commenced

4.6.3 Primary Data

Interviews

Interviews are important form of evidence in research because they report human affairs 'through the eyes of the interviewees', and well-informed respondents can provide important insights into a situation (e.g., Neuman 2003; Rubin and Rubin 1995; Yin 1994). In this study, two major forms of interviews were used: structured interviews and in-depth inteviews.

Structured Interviews

As already discussed in Section 4.2, this study began with a household survey, in which structured interviews were conducted with male and female water users. The survey was mainly exploratory and was cross-sectional as the respondents were interviewed in a one-time period (Fink 1995:49), between September and November 2011, using a structured questionnaire developed after the literature review and preliminary visits to the study area (appendix A). The questionnaire contained standardised or 'close-ended' questions (Schutt 2006) and was administered through face-to-face interviews, targeting male and female individuals aged 18 years and above, and younger male or female household heads for the case of child-headed households. Whereas the interviews seemed to be 'positivist', we (myself, a Doctoral student colleague from Dublin City University [DCU] and the seven Community Health Workers [CHWs]) employed aspects of 'feminist interviewing' such as openness, careful listening, and allowing respondents to express themselves (Neuman 2003:299). The survey questions addressed or incorporated the following key study themes: socio-demographic characteristics of the respondents, some of which are kinds of 'social power' (Harding and Norberg 2005); livelihoods and well-being; access to water; and participation of men and women in decision-making processes. The data from the survey was then used for investigating the 'how' and 'why' (Yin 1994:6), or explaining phenomena and 'outlier cases' (Creswell 2003:221), through qualitative forms of evidence, which are illustrated below.

In-depth Interviews

In-depth Interviews (IDIs) or 'intensive interviews' are qualitative research techniques in which a researcher or interviewer asks open-ended, 'discovery-oriented' questions to an interviewee or respondent with the aim of deeply exploring the respondent's feelings and perspectives on a

subject or social phenomena (Kvale 1996 ; Schutt 2004). According to Noaks and Wincup, open-ended interviews also allow the interviewee *"the freedom to talk and ascribe meanings"* while bearing in mind the broader aims of a project (2004:182). For Schutt, IDIs are 'active' interviews which require one to learn in advance about the setting to be studied, say through an 'inspection of written documents', and they follow a pre-planned outline of topics, while allowing the flow of the conversation in the direction of the interviewee's experiences and interests (2004:298-299).

Thus, this study used IDIs in order to get more insights from the results of the survey and some of the issues that emerged from the FGs, and to also *"access directly what happens in the world"*, or to *"examine what people actually do in real life, rather than asking them to comment about it"* (Silverman 2006:113,118). The study also hoped to access men and women's feelings, attitudes and values which could not be observed or accommodated in the survey (Byrne 2004:182), and to elicit *"authentic accounts of subjective experience"* (Silverman 2006:123). Having identified a number of issues in gender and water governance in the literature review and from the survey, 'guided interviews' (Kvale 1996 ; Neuman 2003) or guides (or topics) for both the key informant and focus group interviews were developed (appendices B1 and B2) and used to probe the interviewees along the themes and aims of the study.

Key Informant Interviews

Key Informant Interviews (KIIs) are qualitative in-depth interviews with people who have knowledge about a given community, sometimes known as 'key informants' or 'knowledgeable insiders'(Bailey 1994; Rubin and Rubin 1995; Gilchrist and Williams 1999). In the words of Goetz and Le Compte (1994), key informants are *"individuals who possess special knowledge, status or skills, and who are willing to share their knowledge and skills with the researcher through other means"*. Yin adds that:

> *Key informants are often critical to the success of a case study. Such persons not only provide the case study investigator with insights into a matter but also can suggest sources of corroboratory evidence.*
>
> (1994:84)

According to Gilchrist and Williams (1999), there are two types of KIIs: telephone interviews and face-to-face interviews. In this study, I used face-to-face interviews because the interviewees could physically be reached; I also made prior appointments with them to agree on friendly venues that accorded me enough time for lengthy discussions with them. As discussed earlier in Sections 4.4 and 4.5, this study used key informants who had special knowledge; held strategic positions (socio-culturally, technically and administratively); and were 'at the centre of events' (Neuman 2003:395) in access and governance of water at village, Parish, District and National levels.

Focus Groups

Typically, focus groups (FGs) are unstructured group interviews in which the focus group leader, 'moderator' or 'facilitator' actively encourages discussion among participants on topics of interest (Schutt 2006:287). In this study, FGs were used not only to complement or interpret the results from the survey, key informant interviews and participant observation sessions as indicated earlier, but to also elicit the experiences, views, thoughts, attitudes, wishes and concerns of the community in 'safe and smaller groups' (e.g., Stewart and Shamdasani 1990; Vaughn, Schumm, and Sinagub 1996; Barbour and Kitzinger 1999) or what Krueger and Casey call *"a permissive, non-threatening environment"* (2000:5). Barbour and Kitzinger point out that focus groups explore how accounts are articulated, censured, opposed and changed through social interaction and how this relates to peer communication and group norms. They note that:

> *The idea behind the focus group method is that group processes can help people to explore and clarify their views in ways that would be less easily accessible in a one to one interview. When group dynamics work well the participants work alongside the researcher, taking the research in new and often unexpected directions.*
>
> (1995: 299)

Wilkinson (1999) further contends that getting more in-depth information from focus group discussions requires that the type of participants, number of groups needed, the topic or activity on which the groups are to focus, the conduct of the sessions; recording and transcription issues, and the analytic frame are taken into account. Hence, focus group discussions are also ideal tools for feminist research. For example, they emphasize group interaction as opposed to decontextualisation, hence enabling one to access the attitudes, feelings and experiences of groups who have been marginalised or silenced within society; and, because participants come

from ‘naturally occurring groups’, focus group interviews also provide an opportunity for deriving understandings from the ‘lived experience’ of women (Wilkinson 1998; Wilkinson 1999; Hesse-Biber and Leavy 2007:173).

Thus, this study conducted focus group discussions with three different groups that were germane to its aims: men; women (both as ordinary water users); and WUC members. A day before each focus group interview, I asked the Village Chairpersons to confirm the venue and availability of the identified participants, and the FGDs were conducted in locally agreed quiet and neutral environments, (many of which were village meeting venues, such as residences of members of the village and neighbouring schools) so as to allow the participants to express themselves freely in safe and non-threatening environments. Three separate ‘homogeneous’ groups were also designed to ensure that participants felt supported and empowered by a sense of group ownership and cohesiveness (Peters 1993), and to privilege minority voices and maximise disclosure (Hesse-Biber and Leavy 2007:184). This was because, as illustrated in Chapters Two and Three, men and women have different experiences and voices with regard to water. For this reason, the focus groups were segmented, with at least 10 being separately homogeneous (5 with men and 5 with women) to make the women more comfortable and also observe the differences in experiences among the groups (Hesse-Biber and Leavy 2007; Reinharz 1992). Prior information had also indicated that many women in Makondo Parish may not reveal some information on aspects relating to power relations in their households in the presence of men (Makondo Parish Key Informant, *pers. commn*.).

I conducted each female focus group discussion with at least one of the female CHWs I used in the survey as my ‘co-researchers’, alternating them in the villages (Bailey 1994; Sim 1998). The female CHWs had three roles in the focus group discussions: recording the different views of the participants in a notebook; observing the non-verbal interactions within the group and linking them to what they were saying (a digital recorder was also used to minimise ‘reactive effects’ and for later verbatim analysis – Sim 1998:347); and interjecting where necessary in the discussions so as to gain a deeper understanding of the women’s perspectives on water in their households and respective villages. By working with the female CHWs, I sought to have

somebody who would empathise with and understand the views or experiences of the women in each focus group, and also get the trust and attentiveness of the female (and male) participants.

Also, three gender analysis tools were used in the FGs: the *access and control profile*; *daily activity clock* (both from the Harvard Analytical Framework[21], e.g., Rao, Anderson, and Overholt 1991) and *the gender needs matrix* (Moser 2002; Moser 1993b), so as to investigate access and control of water resources; gender roles in water-related activities; and water needs of men and women, respectively. Two FG guides were developed, one for the male and female water users, and another one for WUCs; both guides had open-ended simple questions, beginning with engagement questions or 'ice breakers' (Stewart and Shamdasani 1990), such as introductions; exploration questions that addressed study themes; and exit questions, which probed participants views on the status quo and any other issues that they felt had been left out (see appendices B2a and B2b).

In addition, the focus group discussions were conducted in Luganda, the local *lingua franca*, as most of the participants were either illiterate or semi-illiterate; because I know Luganda, I did not need a translator. The FGs took between one and a half to two hours and were conducted during day time, between 12 noon and 4pm so as to fit into the activity schedules of the participants, especially women. There was only one case in Misaana Village, where a female FG went on up to 7pm because the women arrived late. Apologies were sent to their husbands and families immediately after the interview, explaining the delayed commencement of the discussions so as not to antagonise their husbands and to conform with the cultural patriarchy. This was because women were expected to be at home before dark to prepare supper for their families, and their movements were 'monitored' or restricted by their husbands/partners. The participants were also offered refreshments (a bottle of water or soda and a small snack), and since they did not travel very long distances to come to the venues, they were not reimbursed for transport, as is the practice in cases where participants incur travel expenses (Barbour and Kitzinger 1999:10). In order to have an accurate 'rendition of the interviews' (Stewart and Shamdasani 1990; Vaughn *et al.* 1996) all the key informant and focus group discussions were recorded using a digital recorder, with prior permission from the participants.

[21] also called the 'Gender Roles Framework' (Overholt et al. 1985)

Participant Observation

Participant Observation (PO), an ethnographic method or 'naturalistic technique', involves studying people in their natural settings so as to capture their social meanings and ordinary activities (Bailey 1994; Bryman 2008). Bailey (1994) and Denzin and Lincoln (2005) continue that PO enables one to view events, actions, norms, and values from the perspective of the participants; attend to 'mundane detail' or understand what is going on in a particular context and provide clues and pointers to reality; and to situate him/herself in a wider social context.

I therefore opted for PO to personally observe the mundane details of water collection particularly at the water points in the case study villages, and also get some perspectives from the water fetchers. In this way, I also tried to compare theory and earlier findings with the participants' perspectives, as I had stayed in the field for five months and the participants were more comfortable while talking to me as many of them had known me by then. This is why participant observation was the second last stage of my research activities. The observation sessions were conducted in three villages at three "improved" and three "unimproved" water sources with the intention of focussing attention on the 'social dynamics' of water collection (Schutt 2004:290). First, I got 'gatekeepers' or 'sponsors' (four CHWs, two males and two females, each 'gate keeping' in their home villages since they were well known to the participants) to work with me at each of the water points so to further 'smoothen' my interactions with the participants (Bryman 2008:409). The role of the gatekeepers was to introduce me to the participants, and take notes in the local vernacular, which I then compared with my own field notes (recorded in a field notebook using short hand/jotted notations and detailed notes, Bryman 2008:420) at the end of each day. I also adopted the 'observer-as-participant' role, an overt observation technique in which I interacted with water fetchers and interviewed some of them while observing 'naturally-occurring phenomena' (Katebire 2007:109; Silverman 2002; Bryman 2008:410). I informed the participants at the water points about the aims of my study to develop rapport and gain 'a direct sense of what they experience' (Schutt 2006:296). In this way, I understood the diverse perspectives of men and women in water collection or access, many of which could not be easily discerned from the survey, focus group discussions and in-depth interviews. I practically observed how 'insiders' collect water, using what (containers), how long

it took them, distances moved, among other burdens that children and women experienced. I now move on to the community meetings as another method employed in this study.

4.6.4 Community Meetings

Community meetings are commonly used in developing communities in order to understand poverty from the communities' point of view (Krishna 2005). Community meetings have previously been used in Uganda to assess household demand for improved water and sanitation services (Davis and Whittington 1998). This study used community meetings so as to bring male and female water users in each village together to discuss gender and water governance issues, particularly for their surrounding water sources.

More specifically, community meetings were used to explore some elements of participation in water management in the study villages, incorporating participants from water sources that were presumed to have 'dull' committees and those with 'active' committees, with whom I also deliberated some of my earlier findings. Later on, I tried to revive the 'dull' or inactive committees together with the Sub County HPM and Village Chairpersons, as my contribution to the community. The latter helped in mobilising the village communities for my meetings, and their authorisation was necessary in order to work with the community members, as is the norm when undertaking research in any village in Uganda. During the Community Meetings, I also took note of aspects such as attendance by gender, election processes for WUC members in the case of inactive WUGs and aspects of water policy indicated in Chapters Two and Seven. The next section outlines how the data was analysed.

4.7 Data Analysis

As discussed in Section 4.6, this study used a survey and other qualitative forms of evidence. The responses from the survey were entered in Special Package for Social Scientists (SPSS) Version 17.0 and analysed using univariate and bivariate statistical methods (Schutt 2004:368-408). Socio-demographic characteristics such as sex of respondents, village and household type were analysed using descriptive statistics, while cross-tabulations were done to generate tables and bar graphs to visually display the relationships or associations between variables of interest (Schutt 2004:372-404). Gender differences in relation to aspects such as water-related tasks,

maintenance and attendance of or participation in meetings were analysed using the Chi-Square test (with 0.05 as the *p* value) so as to predict causal relationships, as illustrated in Chapters Five, Six and Seven. There were two 'levels of social life' or units of analysis for the survey data, which depended on the questions or themes covered: individual (men and women, the main unit of analysis), and households (male, female and child-headed), the 'embedded' units of analysis (Yin, 1994:24).

All the qualitative data was recorded using a digital recorder and stored on a laptop computer. It was then analysed through content analysis, in which inferences were made by systematically and objectively identifying specified characteristics or messages or through establishing categories and systematic linkages between them (also known as 'pattern-matching', Neuman 2003), and counting the number of instances when the categories are used in a particular item of text (Barbour and Kitzinger 1999; Silverman 2006; Gous 2008). Driven by the need to have a better feel of my data, I opted for manual content analysis, following the general stages described by Silverman (2006:158-164), as follows:

- I transcribed the verbatim from the focus group discussions, key informants, and the observation text and checked the transcripts at least five times for accuracy;
- Re-read the transcripts while listing the emerging themes from the words, sentences and paragraphs;
- Constructed, piloted, revised and tested a coding frame matching with the observed themes;
- Developed a 'master file' or data file in Microsoft (MS) Excel 2007, which detailed the themes in a tabular form, and identified each occurrence of a particular theme from the data for analysis;
- Used three different colours or highlighters to distinguish the themes, with each highlighter showing the text or narratives for a particular theme, say access, collection and participation in water management; and
- Collated the extracts/text by cutting and pasting it into the respective themes.

With this, I observed the frequency and dominance of the themes counted from the tables in the master file. Altogether, the data from the survey, in-depth interviews and focus group discussions was collated and triangulated to enhance its validity and reliability (Bailey 1994), as illustrated in the next section.

4.8 Data Quality Control

This study adopted three key aspects that improve the quality of research during data collection and analysis, and which ensure accuracy. These were the related concepts of reflexivity, reliability and validity, which are expounded below.

4.8.1 Reflexivity

Reflexivity is an ethical practice of research in which researchers critically reflect on how they construct knowledge from the research process. Reflexivity requires one to constantly take stock of his/her actions and role in the research process and subjecting these actions to scrutiny and interpretation. As noted by Guillemin and Gillam, researchers reflect on *"how their research intervention might affect the research participants before any actual research is conducted and consider how they would respond in the sorts of situations that they can at this stage only envisage"* (2004:277). A central aspect of reflexivity is 'positionality' of a researcher, or the position of the researcher in relation to the participants (e.g., Chiseri-Strater 1996; Harding and Norberg 2005; Mosselson 2010), which largely influences the research process. This may occur as a result of the researcher's relationship with the research topic; how he/she conducts the research; the participants/interviewees' responses; how data is produced and how the researcher interprets the results (McCorkel and Myers 2003; Chacko 2004; Fonow and Cook 2005; Nightingale 2006).

Thus, I attempted to improve the quality of this research by critically reflecting on my position and that of the researched, the methods that were used, why and how so as to reconcile my position with that of the participants (Arendell 1997; Harding and Norberg 2005; Hesse-Biber and Leavy 2007). First, I approached this study with the understanding that rural Uganda, like many parts of the developing world has numerous social injustices that transcend many aspects of human development, including access to water, and that in most cases women are most

affected. This status quo, like many other social inequalities needs to change (Kobayashi 1994:73) so that women and men enjoy better lives. Secondly, the aims of this research enabled the recognition of difference. From the literature review, it was discovered that women and men are differentially impacted by water availability and decision-making opportunities due to cultural norms and differences in, for example, socio-economic status. It was clear from here that there was a need to incorporate a feminist approach in all the methods used in the study so as to capture 'subjugated knowledge' or women's voices (Reinharz 1992; Merters 2003; Hesse-Biber and Leavy 2007:147).

More still, the study used multiple sources of information for purposes of triangulation and developing *"converging lines of inquiry"* (Yin 1994:92; Creswell 2003:196). The survey questions and focus group and in-depth interview guides followed the study themes, the latter open-ended so that both my perspectives and those of the participants would be taken into consideration. Efforts were also made to let the participants control the flow of the conversations and listen to them with devotion (Hesse-Biber and Leavy 2007:131-132). During the first in-depth interviews, 'memoing' or note taking was done for key responses, whether 'positive' or 'negative' (Bailey 1994; Hesse-Biber and Leavy 2007), which were 'tested' in the subsequent methods (see Section 4.2). The findings from each of these methods were also corroborated, since they were used to investigate similar phenomena based on the themes of the study.

Also, the survey, in-depth interviews and focus groups used in this study were interview-based, yet interviews can be affected by a researcher's age, gender, class, caste, sexuality, nationality, historical-personal circumstances and institutional affiliation (Chiseri-Strater 1996; Chacko 2004; Riach 2009). Chacko refers to race, class, gender, caste and sexuality as *"markers of relational positions in society, rather than intrinsic qualities"* (2004:52). Thus, there were three possible differences between myself and the study participants: class (my middle class, post-graduate education and affiliation with the School of Women and Gender Studies in Makerere University and WIL); gender (as a 'culturally ascribed' male studying gender and seeking to interview or capture voices of women) and ethnicity (I am a Mutooro, a tribe from Western Uganda yet the majority of the participants were Baganda, the dominant tribe in Central Uganda).

Therefore, to minimise the effect of the above three power differences, I ascribed more 'active roles' (Riach 2009) to the study participants by engaging people from within their own community in my study, particularly the CHWs, as discussed in Section 4.6. The only difference between the CHWs and the study participants was that the former had received some training on interviewing and basic health from the Medical Missionaries of Mary. During the training of the CHWs prior to the survey, I discussed all the methods I was going to use with them and also worked closely with the Village Chairpersons so as to 'equalise the balance'(Wolf 1996). This 'collaborative inquiry' not only minimised my influence, but also enabled me, at least by the end of the survey to know many individuals in the study area, who also got to know more about the study and became more willing to provide information in the qualitative investigations that followed. I also developed good collaborative relationships with the participants in general because I stayed in a guest house in the Parish for at least six months, with some weekend breaks to Kampala to visit my family. Also, my rather privileged position as a PhD student at NUI Maynooth in a way 'empowered' me to get audience and acceptance from all the key informants. For example, the District Key Informant, who had met with the WIL management on several occasions before meeting me, welcomed me with ease, saying my study was 'enlightening' for his office. Similarly, contacting some government and NGO informants and getting relevant documents from them was relatively easy as they were excited about the study.

Turning to gender, I endeavoured to work with women so as to capture the voices and experiences of the female participants (e.g., McCorkel and Myers 2003; Hesse-Biber and Leavy 2007). I have already indicated that three of the CHWs were females; focus group discussions were conducted with a female as a 'co-researcher' or assistant facilitator; and that two females acted as 'sponsors' in the participant observation sessions. Regarding my ethnicity, I shared one of my 'insider' characteristics with the participants in Makondo Parish, by informing them that although I was a Mutooro (a tribe from Western Uganda), I grew up and studied from the Central region. This enabled me to learn the cultural practices of the Baganda and that it was the reason I spoke Luganda fluently. This reduced the social distance between myself and the participants as I could speak to them freely. As for the more educated Key Informants from government and NGOs, I used English, Uganda's official language. I have described how I scrutinised my actions

and role in the research process, which then brings me to the reliability of the strategy and methods I used.

4.8.2 Reliability

Before undertaking the survey, a literature review on gender and rural water management was carried out to identify the major themes and variables, as demonstrated in Sections 4.2 and 4.6. This helped in *"streamlining the survey questions to the objectives of the study"* (Fink 1995:5). It is also argued that good survey interviews need to train the interviewees for 1-2 weeks so that they learn what the survey is about and their role (Neuman 2003:296). After producing the first draft of the survey questionnaire, it was taken to the Makerere University Institute of Languages for primary translation to Luganda, so as not to distort the meaning of the questions (Creswell 2003). After this, the seven CHWs, all of whom were mature (all were aged above 35), with *"non-threatening appearances"* and *"experienced in working with many types of people"* (Neuman 2003:296), at least in Makondo Parish, were recruited to conduct the survey. The survey tool was introduced to the CHWs, who revised it to suit the local Luganda before we trained them for one week on how to conduct structured or standardized face-to-face interviews (such as following the sequence of questions; not interpreting the meanings of the questions to the interviewees, etc.); how to use a Global Positioning System (GPS) reading for mapping purposes; and their role in the study. After training the CHWs, the survey was piloted in one village in Nanywa Parish, about five kilometres away from the centre of Makondo Parish, an exercise that took two days. Up to 20 respondents were interviewed (10 male and 10 female), after which we convened for a post-pilot meeting with the CHWs. During this meeting, we used the responses received to revise the questionnaire by, for example adding more codes for some responses and rephrasing ambiguous questions. The focus group and key informant interview guides were also pre-tested in two other villages in Nanywa Parish, using four groups of community members (two male and two female, each with ten participants), and two Village Chairpersons, respectively. All these steps, at least from piloting the tools or instruments to collecting the data took a period of six and a half months, from August 2011 to mid-February 2012.

More still, having a data base increases the reliability of an entire case study (Yin 1994:95). Thus, the data from this study was organised in a data base and stored in different forms in accordance with the methods that were used. Data from the survey was entered in Epi Info and then checked and cleaned. Initial editing was also performed using simple frequency and pivot table observation. The data was then transferred to SPSS for further editing by generating summary statistics for each variable. Data transformation was also performed for some variables before the actual analysis started. The data from qualitative interviews was stored in a master file in the form of typed notes as per the method used and following the themes that emerged. The observed phenomena were kept in MS Excel (mainly as narratives and sheets or tables so as to make counts – Yin 1994:98; Schutt 2006), and in the forms in which they were obtained or basing on the views of the study participants for easier retrieval. The themes that emerged from the qualitative data were compared with data from the survey and from subsequent literature reviews. Some of the notes made in the field were not typed and were kept in A4 size note books for quicker reference.

The secondary data (e.g., journal articles, policy reports, research reports, whether local, Ugandan and global) and archival records that were identified were also kept in various folders as per the themes they addressed for easier retrieval. As illustrated in Chapters Five, Six and Seven, the study findings were written through triangulating data from the survey and qualitative methods, with due regard to the power structures in Makondo Parish and beyond, and the voices of both women and men.

4.8.3 Validity

Whereas some of the validity issues have been discussed in Sections 4.2, 4.5 and 4.6, there were a few others that were taken into account. With regard to the research period, the entire study took a period of about eight months with each phase being undertaken at different times following the sequential mixed methods design discussed earlier. The sampling procedures for the survey and the qualitative interviews represented the population in Makondo Parish and probably minimised imprecision with regard to external validity, sample generalisability, or *"cross-population generalizability"* (Schutt 2004:18). For example, the "improved" and "unimproved" water points selected for the participant observation sessions served to strengthen

causal conclusions and make the findings more generalisable (Schutt 2004:290). The literature review and reconnaissance visits that were done prior to starting the study minimised errors in content/construct validity, as general issues such as the historical, geographical, demographic, environmental, economic and social characteristics of Makondo Parish, types of water resources and heterogeneity, social exclusion and possible gender issues in relation to water resources were examined and included in the survey questionnaire and interview guides. As explained in the previous section, content validity was also improved by piloting the questionnaire and qualitative interview guides before real data collection began. The use of the CHWs in the various methods enhanced the sharing of findings and their validation by the community, while triangulation and corroboration of the findings from these methods (Section 4.7) also improved construct validity (Katebire 2007:30; Bailey 1994; Silverman 2002). The data were also analysed following standard univariate and bivariate criteria for the survey and content analysis for the qualitative interviews, as explained in Section 4.7.

4.9 Ethical Considerations

Any present-day research has to incorporate ethical concerns and negotiate various dilemmas so as to generate scientific knowledge while protecting the participants or subjects (e.g., Creswell 2003; Neuman 2003:16). Thus, this study began by fulfilling the 'procedural ethics' (Guillemin and Gillam 2004), through seeking ethical approval from the research and ethics committee of NUI Maynooth and the Uganda National Council for Science and Technology (UNCST). The study was approved by the Ethics Committee of NUI Maynooth on 8th November 2010 (see appendix Ca), while local approval from UNCST was secured through WIL. The study was guided by the professional code of ethics of UNCST, the *National Guidelines for Research Involving Humans as Research Participants, 2007*, particularly sections 5, 6 and 7 (UNCST 2007).

The study was also guided by the principles of informed consent, privacy, confidentiality, anonymity, voluntary participation, openness and honesty (e.g., Neuman 2003:116-135; Bailey 2004; Bryman 2008). Securing prior voluntary consent where possible is a vital ethical issue in social research (Neuman 2003:124); thus, I developed an informed consent form that showed the purpose and objectives of my study, procedures, participants' voluntary involvement, details of WIL under which I undertook the study, and my local and Irish address, *inter-alia* (see appendix

Cb). Through the pre-study visits, I discussed my plans with some Village, Parish, Sub County and District 'representatives' so as to build trust (e.g., Bailey 1994; Chacko 2004; Schutt 2004) and obtain their permission. I also showed them my ethical clearance letter and gave them copies of my consent form, which they signed on behalf of the community. For example, I approached the villages through Village Chairpersons, who signed the consent forms on behalf of all the individuals in their villages. Verbal consent was also used to notify the 'ordinary' survey respondents, focus group discussion and participant observation participants about the aims and objectives of the study in local vernacular, sometimes assisted by the CHWs. All this ensured that the concerns and objectives of the study were well understood by the community.

Considerable respect was accorded to the study participants and their identities were protected to ensure confidentiality and anonymity. For example, at the beginning of every interview, participants were asked for their time and the duration of the interviews explained to them. The use of anything that would lead to the identification of the information the participants provided , such as their names or titles was avoided by using 'pseudonyms' or generalised titles or positions, as also illustrated in Chapters Five, Six and Seven. The responses from the participants were also kept confidential and all the data was locked up in a drawer in my office. The recorded and typed data from the in-depth interviews and participant observation sessions were stored using unique identifiers on my laptop computer, which is password protected. The data was also analysed privately and will be kept for about five years for publications and any other ethical use that will be determined by WIL. At a later stage, simplified and summarised findings will be disseminated to the community through their local leaders and local water institutions such as WUCs.

4.10 Study Limitations

This study was undertaken after a politically sensitive period in Uganda, as local government, parliamentary and presidential elections had just been conducted at the beginning of 2011. To avoid the risks associated with this politicking period, such as suspicion from the community, hijacking of fieldwork activities by politicians or interference due to campaigns, I used the first politicking months for pre-field activities as explained in section 4.9 and then delayed the main field work activities until August, six months after the elections.

The other challenges I met were associated with the estimated time for the interviews and weather. The survey and participant observation procedures for example took longer than expected, due to underestimating the differences in the response rates of the study participants. This depended on participants' interest in the questions, activity schedules, knowledge of the subject matter and education levels; for example, it took more than the earlier estimated 45 minutes to interview up to 200 individuals during the survey, many of whom were found working in their gardens. Consequently, the survey took 10 weeks, two weeks more than the eight weeks that had been planned for it. In addition, bad weather, characterised by heavy rains and impassable muddy roads between September and October also slowed the survey down as the roads were sometimes so bad that our vehicle got stuck and had to be pushed.

More problems were met while meeting the survey respondents. A good number were interviewed within the confines of their households, but some households were not very sanitary as they lacked toilets. The unsightly view of human excreta was common along the paths to these households or around their homesteads, which made me and the CHWs uncomfortable. Also, some respondents declined to be interviewed. For example, sometimes when a couple was found at home, the woman would decline to be interviewed, preferring to have her husband do the talking or vice versa. But even then, over half of the survey respondents turned out to be women, which perhaps, from a feminist point of view and going by their roles and knowledge of water issues in their households and the community at large could have been advantageous.

During the participant observation sessions, it was also necessary to go beyond the two estimated hours of observing the participants at the water points due to busier times of water collection, and at times the distance moved to follow a participant to his/her home came into play. In one incident, a male participant demanded to know how I came to the community and whether I had the permission of the Village Chairperson to carry out my observations. I then explained to him the genesis of my study, my objectives, and how I came into the community through WIL and the Village Chairperson.

Another major challenge was meeting the District and national level Key Informants. These individuals had busy schedules and fitting into their programmes and making appointments with

them was sometimes difficult. They often cancelled appointments due to work-related impromptu meetings and travel, and this greatly limited my targeted sample. Despite this, a number of those I managed to meet accorded me enough time for the interviews, such as two female individuals who spared over an hour of their precious time. The next chapter (also the first empirical Chapter), examines the gender issues in access to water that emerged from Makondo Parish.

Chapter Five: Precarious Access to Water

5.1 Introduction

In Chapter Three, we saw from Foucault (1978, 1981) that power is dispersed and is 'everywhere', exercised through a web and that it operates in various forms or social hegemonies. Lukes and Foucault also add that power struggles occur among actors in social and cultural relations and at various socio-political and geo-political levels. We also saw that gender relations operate at individual and institutional levels, and through social processes, cultures and organisations (Acker 1992; Wharton 2005). Similarly, access to water is determined by social or relational (and rights-based) factors, and gender shapes who controls and who accesses water within these. Hence, in this Chapter, I largely draw on social theories of access to natural resources advanced by Jesse Ribot and Nancy Peluso (2003), and water governance proposed by Tom Franks and Frances Cleaver (2007) to explore the gender issues in attaining, maintaining and controlling water in the study area.

I discuss the social or relational and rights-based 'mechanisms' that shape men, women, boys and girls access to water. I begin with the main social mechanisms that emerged from the study area, which included: water technologies; formal institutions; knowledge and information; payments or in-kind contributions; labour (or 'physical labour' for water collection as examined on its own in Chapter Seven); identities and social relations. I then move on to the rights-based modes which included local entitlements and local property rights, which are 'legal'; and the 'illegal' overt force and stealth behaviour. I explicate the interrelationships between some social and rights-based mechanisms of access to demonstrate the gendered vulnerabilities to the prevailing social conditions, relations and processes that complicate access to water in Makondo Parish.

5.2 Structural and Relational Mechanisms of Access to Water

As we have noted in Section 5.1, power is dispersed and operates in various forms or social hegemonies, and power struggles occur among actors in social and cultural relations and disciplinary regimes (Foucault 1978, 1981). Therefore, I will largely draw on the theorisations of

Ribot and Peluso, Franks and Cleaver (2007) and to some extent Foucault to outline the social relations of access to water that emerged from Makondo Parish. I begin with water technologies.

5.2.1 Water Technologies

Technology, 'tools' or 'human tools' (Crow 2001), whether advanced or not and their associated institutions can either control physical access or increase or facilitate the ability to reach a resource (Ribot and Peluso 2003:165). Both advanced (or "improved") and "unimproved" water technologies were found in Makondo Parish, and in their forms determined how men, women and children accessed water, as explained below.

The Tools: Improved and Unimproved Water Sources

In Makondo Parish, "improved" and "unimproved" water technologies increased the ability of the communities to reach the ground water sources, and to benefit from water. Pre-field work visits and the survey for example established that the "improved" water technologies in the parish were tube wells or pumps (of the Indian U2 design for shallow wells and U3M for deep wells or bore-holes) and a protected spring. There were 37 "improved" water technologies in the Parish, of which eight were bore-holes; 28 shallow wells and one protected spring. All the bore-holes were not functioning, at least at the beginning of the study, and only seven shallow wells and the protected spring were functioning. Bore-holes and shallow wells in particular were found in almost every village, but the only protected spring in the Parish and in the whole of Ndagwe Sub County was in Makondo Village. Whereas most of the "improved" water technologies were established by NGOs and government/local government (Chapter Seven, Section 7.2), the "unimproved" sources (such as ponds, open or hand dug wells and unprotected springs) were set up by individuals or household members within the community. The "improved" water points were run following particular formal 'rules' or arrangements, while the "unimproved" had customary rights or practices. But how were these technologies used in the Parish, by which gender group and why?

Following up from pre-field work visits to various villages in Makondo Parish, the survey participants were asked to state their main sources of domestic water (including drinking water). In spite of the existance of some functioning "improved" water points in their midst, the majority

of the survey respondents (41.5%) admitted that their households mainly used water from "unimproved" sources (Figure 5.2.1a).

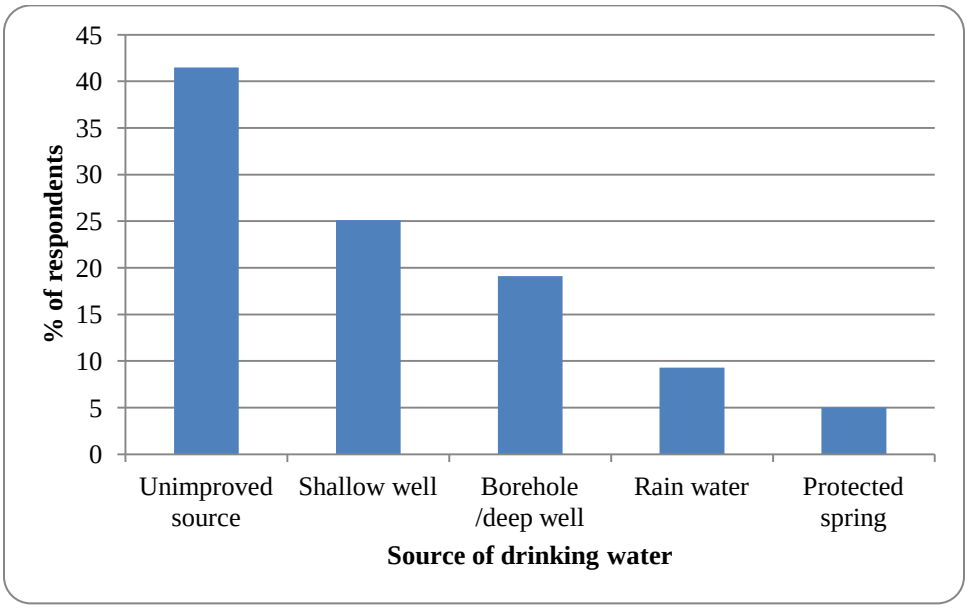

Figure 5.2.1a. Main Sources of Drinking Water for Households *(n=602)*

From Figure 5.2.1a, only 25 percent of the households used shallow wells; 19.1 percent bore-holes (only when functioning); 9.3 percent rain-harvested water and only 5 percent used the protected spring. The protected spring was shared by communities in Makondo village and other neighbouring villages, such as Luyiiyi Kaate and Micunda. The high use of traditional water sources was observed across all the household types, with some FHHs in three of the case study villages (Misaana, Kibuye and Kanyogoga) using rain-water harvesting technologies[22]. Whereas there was no significant relationship between men and women's knowledge of their main household water sources $\chi 2$, (4, N=602) = 6.20, p =0.18, the relationship between the main sources of water used and housing type was significant, $\chi 2$ (12, N=602) = 35.67, p <0.001, with bore-holes and shallow wells the most predominant sources for households with permanent and semi-permanent dwelling units (which made up 38% and 35.2% of all households respectively). About 17 percent of the households had permanent units with no cemented floor, while 9.3 percent were temporary, built with mud and wattle, grass thatched and with no cemented floor. This could mean that the wealthier households preferred water from "improved" sources, and

[22] These women used their meagre financial resources to purchase RWH tanks with a capacity of 100-200 litres

many of them were located in or close to the local trading centres in the villages of Makondo, Kibuye and Luyiiyi Kaate.

Asked why they mainly used open or traditional water sources, most of the survey respondents said the unprotected sources were more permanent and reliable sources of water; and that they were close or near to their households. In fact, the correlation between the commonly used water sources and permanency/reliability as a reason was highly significant, $\chi 2$ (4, N=602) = 48.48, p <0.001, with the latter having about 61 percent of the survey responses for "unimproved" water sources alone (Table 5.2.1a).

Table 5.2.1a. Main Water Sources and Permanency/Reliability as a Reason for their Use *(multiple responses)*

	Permanent/Reliable	
Water Source	**Frequency**	**Percentage**
Unimproved/open	110	60.7
Shallow well	30	16.6
Bore hole/deep well	24	13.3
Protected spring	12	6.6
Rain water	5	2.8
Total	**181**	**100**

Source*: Field findings, July – November 2011*

The correlation between the main water sources used and proximity was also highly significant, $\chi 2$ (4, N=602) = 22.98, p <0.001, with "unimproved" water sources accounting for 35 percent of the responses for shorter distances to households (Table 5.2.1b). The other reasons the survey respondents provided for using "unimproved" water sources included: 'meet all water needs at home'; malfuctioning pumps/frequent breakdowns of pumps and long delays in repairing them; 'no need to pay operation and maintenance fees'; and 'unplatable' water from "improved" sources.

Table 5.2.1b. Main Water Sources and Proximity to Households as a Reason for their Use *(multiple responses)*

	Close/Near Household	
Water Source	**Frequency**	**Percentage**
Unimproved/open	81	34.6
Shallow well	57	24.4
Bore hole/deep well	49	20.9
Rain water	37	15.8
Protected spring	10	4.3
Total	**234**	**100**

Source*: Field findings, July – November 2011*

The 'reliability' of "unimproved" sources was reinforced by many female respondents (the main water fetchers together with children as indicated in Chapter Six), who felt that ponds and open wells never broke down like the shallow wells and bore-holes, and thus provided water for most times of the year. The presence of many malfunctioning pumps in Makondo Parish was responsible for the high use of "unimproved" water sources, and many women (and children) bemoaned the frequent break down of pumps especially in the dry seasons, with some not functioning for as long as one year or several months. A case in point here was that of the bore-holes in Kibuye, Kiganjo and Kanyogoga villages, which malfunctioned for long periods due to physical/geogenic factors, poor handling and failure to raise operation and maintenance fees, especially from men, as discussed in Chapter Six, Subsection 6.3.4. Many female respondents added that whenever they visited the open sources, they were assured of 'getting water of whatever quality'. On proximity, many of the open wells and ponds were undeniably close to the households, as the majority (42.3%) of survey responses for "unimproved" sources were for those within a distance of less than half a kilometre from households, as explored further in Chapter Six, Section 6.3. Indeed, in the villages of Kanyogoga, Kiganjo, Kayunga, Makondo and Wajjinja, several households depended on open wells that were less than half a kilometre away, yet the nearest functioning pumps were a kilometre or more away. However, there was a highly significant correlation between 'good quality of water' as a reason for using some water sources and the water technologies themselves, $\chi 2$, (4, N=602) = 274.25, p <0.001); with shallow wells and bore-holes having 42 percent and 29 percent of the responses respectively (Figure 5.2.1b).

This again shows that the few households that used these "improved" sources knew that they provided 'safer' water.

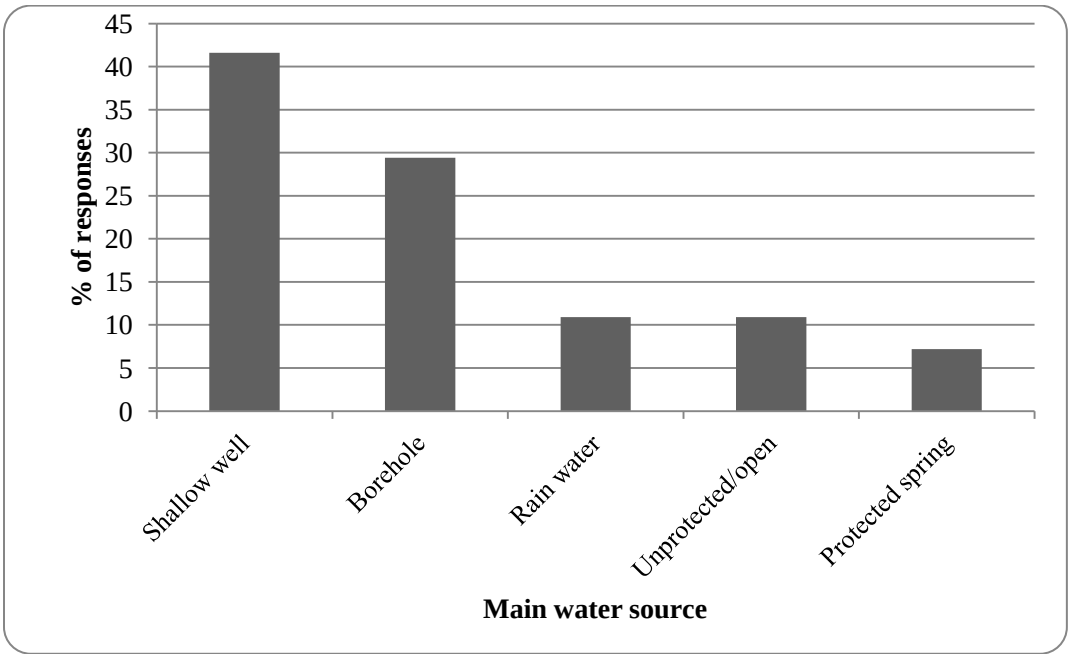

Figure 5.2.1b. Main Water Sources and Good Water Quality as a Reason for their Use *(multiple responses, n=320)*

As for the unpalatability of water from "improved" water sources, some women argued that water from open sources was of better quality, or more 'tasty', and that that from pumps was salty or 'less tasty'(locally described as *tegawooma*). This could have been due to physical, geogenic or engineering factors for some of the pumps, such as the shallow well in Kibuye village that produced salty water due to poor siting and inadequate equipment (well screens) that should have kept out sediments from the pumped water (HPM, *pers. commn*). Fortunately, a large part of Makondo Parish had fewer minerals compared to three of its neighbouring Parishes – Ndagwe, Mpumudde and Nanywa that had more mineralised and hard water (District and Sub County Key Informants, *pers. commn*.). Nevertheless, this shows that the women (and children) in Makondo also had their own understanding of what constituted good or safe water, depending on their sense of taste, hence going for water from "unimproved" water sources, and shunning that from conventional safe or "improved" sources.

One other technology that was not found during the study, but was said to have been used around some pumps in the past, was that of pole fences, which were meant to improve hygiene around "improved" water sources or protect them from animals that could damage them. These poles sometimes restricted women and children from physically accessing the pumps at particular times of the day, and were also used together with locks to deny repair fee defaulters access. Also, theft of the poles and the use of 'force' by some community members was responsible for the lack of the once popular protective poles and padlocks on most pumps, an issue that is explored further in Sub-section 5.3.2 ahead. Poles or pole fences were not common around "unimproved" water sources, perhaps because they were operated under more customary and less restrictive rules.

The above findings on men and women's knowledge of water sources and unreliability of "improved" water technologies are inconsistent with some studies undertaken in other parts of the developing world. For example, a study in rural Ghana testifies that there are gender differences in knowledge of water sources used by rural households, with women tending to have more knowledge (Arku 2010), yet this was not the case in Makondo. Also, in contrast to earlier findings (e.g., Crow and Sultana 2002:715), there was limited evidence of high use of "improved" water sources due to their closeness to households in Makondo Parish. Instead, most households relied on "unimproved" sources as the closer and more reliable sources.

On the other hand, the findings on differential use of both "unimproved" and "improved" water technologies in Makondo Parish corroborate with those of some previous studies. For instance, the dependence on traditional sources with poor quality water even when "improved" technologies are available has been reported in rural Ghana (Whittington *et al.* 2009:705), South Africa (Hazell 2010), rural Nigeria (Nyong and Kanaroglu 1999), semi-arid India (James 2004) and other parts of Uganda (e.g. Kanyesigye *et al.* 2004; GOU 2002). Just like in Makondo, Hazell (2010) also found out that women and children from many households accessed water from open sources due to failure to afford the costs associated with using the "improved" sources and 'lack of adequate water infrastructure' or fewer pumps for the communities, as also reported in rural Ghana (Whittington *et al.* 2009:714). In Nigeria and India, women and children commonly used traditional sources because they were nearer to their homes, as also noted in

Makondo Parish (Nyong and Kanaroglu 1999). James (2004) again observed that in one District of India, the frequent breakdown of "improved" water sources meant that women had to spend three hours a day or more on average collecting water from traditional sources, a scenario that also manifested in Makondo, with women and children spending hours fetching water from neighbouring villages whenever the pumps in their villages broke down. In Northern, Eastern and Central parts of rural Uganda, shorter distances, refusal to pay high O&M fees, and pump breakdowns have also been reported as reasons for the continued use of "unimproved" water sources (Asingwire 2011; Kanyesigye *et al.* 2004; GOU 2002). The unreliability of "improved" water sources in the study area, due to physical/geogenic factors such as poor siting, mineralisation and seasonal changes in the ground water table/recharge corresponds to what has been ascertained in various parts of Uganda (Ademun 2009; Mommen and Nekesa 2010; GOU 2007, 2009; RWSN 2010, 2012; Socio-Economic Data Centre 2001) and Africa (Arouna and Dabbert 2010; Asingwire 2011; Coles and Wallace 2005; WHO and UNICEF 2012).

The issue of community preference for some water technologies, which, in this study, was evidenced by participants desiring water from "unimproved" sources due to its palatability has been confirmed by Moriarty *et al.* (2004). These authors noted that the purpose for which a community uses a water source determines their preference, and women and men in Makondo Parish argued that water from open sources would be used for 'all' their household activities. The 'tasty' water from open sources as described by participants in Makondo Parish is analogous to what Singh (2006:103) described as part of 'local cosmologies' in rural India, where some women also rejected water from "improved" sources because that from traditional (or "unimproved") sources was 'colourless, odourless, and sweet', and therefore better for their basic needs such as drinking and cooking. However, there is also conflicting evidence from parts of central Africa that some households may prefer collecting water for basic needs such as drinking from "improved" ground water sources because they provide cleaner water, or water that is more suitable for drinking (e.g., Ebato and van Koppen 2005).

Thus, it is comprehensible that water technologies in Makondo Parish shape access to water depending on their reliability, proximity, requirements for O&M fees, and especially women's perceptions and preferences about water use and palatability. The unreliability of shallow wells

and bore-holes, coupled with the consequences of failure to pay repair fees mostly affects women and children, the culturally disciplined and docile water collectors who bear the burden of carrying water for even longer distances from alternative sources as discussed further in Chapter Six. But the ability to have water was also shaped by the paths and roads that individuals in Makondo Parish used to reach the water sources, as expounded below.

Poor Roads and Paths

Roads, paths, or 'roadways' are technologies that increase or facilitate the ability to physically reach a water resource, as they can alter the number of people or types of vehicles that are able to reach a remote locality (Geisler and Silberling 1992, in Ribot and Peluso 2003; 165). Sorensen *et al.* (2011) have also noted that if poorly designed, roads can increase the burden and risks associated with carrying water in rural developing communities.

In Makondo Parish, one of the major problems the respondents faced while using or collecting water from the main sources was that of poor roads and paths (17 percent of the survey responses, Table 5.2.1c). The other problems are explained more explicitly in Sub-section 5.2.4, and in Chapter Six.

Table 5.2.1c. Major Problems Faced in Using and Collecting Water from Main Sources *(multiple responses, n=602)*

Problem	**Frequency**	**Percentage**
Too far from the household	242	25.3
Contamination	182	19.0
Poor/bad roads/paths	163	17.1
Congestion/queues	161	16.8
Risky for children*	82	8.6
Maintenance charges/no money to pay	67	7.0
Drying up/not permanent	37	3.8
Irregular flow	9	0.9
Total	**953**	**100**

Source*: Field findings, July – November 2011;* * Due to threats of rape and injury, etc, as in Chapter Six, Sub-section 6.7.2

Female FGD participants and Key Informants also complained about the uneven, hilly or steep roads or paths to water sources, potholes or stones, narrow and bushy paths, and the risks that they and their children faced while passing through the roads. One of the Key Informants held:

> *The roads and paths to our water sources, such as the ones leading to the Kanyankole open well and the protected spring are not good. These water sources are all in valleys, and women and children have to move up these hilly paths while carrying water.*
>
> (Male Key Informant, Makondo Village)

Observations in Makondo and Misaana villages revealed that the paths leading the protected spring and shallow well respectively were hilly, and that women and children struggled to carry water around the steeper areas close to the water sources, sometimes falling and spilling the water in their containers or jerry cans, or even cracking the jerry cans. Actually, observations at the water points revealed that most of the children had cracked or leaking jerry cans, while falling was common among the child water fetchers, many of whom complained about knocking their feet on stones and other objects, or 'missing steps' on the rugged paths or roads they used while carrying water by hand/head loading to their homes. It was the children that used bicycles, many of whom were boys and usually in pairs or groups of three, with one holding the handlebars while the others pushed the loaded bicycle (with two to four jerry cans of 20 litres each) that hardly ever experienced such accidents. These issues are explored further in Chapter Seven.

Also, some of the water sources could only be accessed by crossing major village roads used by vehicles, motor cycles and bicycles, such as the bore-hole in Kibuye village, the protected spring and other open sources in Makondo and one of the routes to the bore-hole in Kijjajasi village. The road passing through Makondo and Kibuye villages was also the major Parish and Sub County road, with a lot of vehicular and motorcycle traffic that increased the risk of injury or death while moving to the water sources. Because of the fear of being knocked by cars or motor cycles, women from some households in Kijjajasi village barred their children from using the route through a major village road, although the alternative route again exposed them to risks of being assaulted by a mentally disturbed man that lived close to the bore-hole.

Whereas studies on gender and the risks posed by poor roads and paths to water sources in developing countries are few, the present findings support the idea of poorly designed and 'chaotic' roads used by especially women and children as water fetchers, as expressed by Sorenson *et al.* (2011:1525). The hilly, bushy and risky roads leading to water sources in Makondo Parish have made water fetching more difficult, especially for female children and women who carry water loads by hand or head loading, as also described in Chapter Six (Section 6.6). The 'hills' or steep slopes increase the burden of collecting water, while roads that are used by vehicles and motorcycles affect access to some water sources and could also lead to injuries or death. It is important to emphasize again here that it is because of the disciplinary situation or normalising gaze created by cultural norms and in particular patriarchal privileging in Makondo Parish that women provide most of the labour for water collection while men are exempted, and that women and girls' have limited access to technologies such as bicycles. Thus, the burden of fetching water and the associated risks of injuries or death due to poor roads affect women (and children) most. Nevertheless, water technologies cannot be examined on their own; they go with 'non-material resources' or their associated institutions, such as formal institutions that also shaped women and men's access to water.

5.2.2 'Formal' Institutions and Authority

Formally constituted institutions, such as local government structures and user groups or associations mediate access to water by different groups through processes of management and practice (Franks and Cleaver 2007: 295,300; Cleaver and Hamada 2010:29). Being institutions, local government structures or user associations are gendered in their processes, practices, and images (Acker 1992 and Wharton 2005), this gendering being a result of the disciplining of female bodies or 'political technologies' (Foucault 1977; Deveaux 1994).

In Makondo Parish, the influence of WUCs and local administrative arrangements as gendered formal institutions with authority influenced men and women's access to water. Three formal institutions were essential in the Parish: Village Chairpersons, WUCs and the Sub County Hand Pump Mechanic. I discuss each of these below.

Village Chairpersons

Individuals or institutions with the authority to make and implement laws can strongly influence who benefits from a resource (Weber 1978; Watts 1983, in Ribot and Peluso 2003:170), especially where multiple access mechanisms or strands are bundled together in one person or institution.

In Makondo Parish, the Village Chairpersons were well established as the most authoritative individuals in their respective villages. As stipulated in the Local Government Act, Village Chairpersons are recognised as the leaders of their villages, who assume their positions after being elected by their subjects for a five-year term. As we saw in Chapter Two, Village Chairpersons are, *inter-alia*, mandated to supervise all developments in their villages, including water developments; monitor the activities of WUCs; and approve by-laws made by WUCs and forward them to higher local governments and police for approval. Village Chairpersons also have other privileges such as being ex-officio members of each WUC in their villages; and each WUC should have at least one member of the LC I or Village executive, all of which serve to enforce compliance with rules such as O&M fees (e.g., GOU 2007:51-52; 2011:24, 44-46). Thus, the 15 Village Chairpersons in Makondo Parish, all of whom were men due to patriarchal norms and stereotypes, held the highest authority in their villages, and their authority and influence determined who would access water, how active WUCs were, and, eventually when pumps would function. First, it was reported that in some instances, Village Chairpersons denied or allocated access to especially "improved" water sources to some individuals, depending on the relationships they had with them. For example, in one village, a widow in her 70s alleged that the Village Chairperson, through the caretaker and some members of the WUC, denied her, her grandchildren and members of her household access to the bore-hole because she had supported a rival candidate[23] during elections for the position of Woman Councillor for Makondo Parish. While the woman and her family were being penalised for 'not paying repair fees' there were other households that accessed the bore-hole without having paid the fees.

[23] instead of the National Resistance Movement (NRM) party candidate allegedly preferred by the Village Chairperson

The authority that Village Chairpersons had was also evident with the immediate actions taken whenever the pumps malfunctioned. Instead of reporting pump breakdowns to their WUCs, most of the women and men in Makondo Parish preferred to alert the Village Chairpersons. Indeed, when asked whom they would report to first upon finding out that their pumps had broken down, the majority of the survey respondents (61% females and 39% males) mentioned Village Chairpersons, or at the least a member of the village committee as an alternative. Some respondents said that the Village Chairpersons were responsible for 'everything' in their villages, and for that reason they would respond faster whenever their pumps broke down. The Village Chairpersons also sometimes used their power to directly seek the help of the HPM in repairing the pumps, or urged households to pay repair fees, which eventually increased the funds required for repairing the pumps. For instance, the Village Chairperson of Kiyumbakimu village often contacted the HPM, also his old time friend to repair the shallow well in his village whenever it broke down, and he would meet all the costs of repairing the pump (including the HPM's labour), before then recovering his money from contributions of water users from his village. The Village Chairpersons of Kayunga, Kibuye, Kijjajasi, Makondo, and Misaana also often joined hands in urging their community members to pay up the agreed repair fees so as to repair the pumps through the HPM, as discussed later on in this sub-section.

Water User Committees

As noted earlier, WUCs are formally constituted user groups that mediate access to water resources (e.g., Jonsson 2005; Fabricius and Collins 2007). As discussed in Chapter Two, WUCs act as the executive organs of water user groups for each "improved" water point (GOU 2007:12).

In Makondo Parish, WUCs existed for all the "improved" water sources, although most of them were not as active. The practices of the again male-dominated WUCs (as illustrated in Chapter Seven) shaped men and women's ability to access water from the "improved" water sources. The performance of WUCs in relation to the payments made by the water users, financial or in-kind, is examined in Subsection 5.2.4, while process-related issues of governance of the WUCs are handled in Chapter Seven. The manner in which WUCs operated tended to affect the community's access to water in various ways. For example, the mobilisation skills of the WUCs,

their relationships with the Village Chairpersons, and the trust that the water users had in them to handle O&M or repair fees vividly determined women and men's ability to obtain water. Where the WUCs were seen to be more active, such as in Misaana and Kayunga Villages as confirmed from the survey and Village and Parish Key Informants, the pumps took shorter periods to repair because the committee members, many times supported by the Village Chairpersons acted swiftly in mobilising the water users (both male and female household heads, many of whom trusted them) and collecting the repair or maintenance fees. However, in villages such as Kanyogoga, Kibuye, Makondo and others, the WUCs for the pumps were largely less active and could not effectively collect payments from their water users, who had less trust in them, and efforts of their Village Chairpersons in encouraging the latter to pay up were not enough. In such cases, the pumps in these villages malfunctioned for longer periods, usually between six months and a year or even more. Following the long periods of pumps not functioning, the physical burden of collecting water from neighbouring villages or far-off places fell on women and children, the providers of unpaid labour for water collection as dictated by the patriarchal norms in Makondo Parish, as discussed in the previous sub-section and elucidated in Chapter Six.

The Sub County Pump Mechanic

Pump Mechanics are critical to the proper functioning of "improved" water technologies in African rural communities (Ali *et al.* 2008; RWSN 2012a:16). As stated in Chapter Two, HPMs in Uganda operate as private individuals hired by Local Governments (in this case Ndagwe Sub County), or NGOs to handle, maintain and repair pumps. Undeniably, HPMs shaped access to water in Makondo Parish, as discussed below.

The awareness of HPMs (many of whom were again men), their relationships with the communities, Village Chairpersons and NGOs determined functionality of pumps in Makondo Parish, and this shaped 'when' and 'where' women and children would obtain safe water. For example, where he had good relations with Village Chairpersons and WUCs, such as in Kiyumbakimu, Kayunga and Misaana villages, the Sub County HPM would promptly repair the pumps. As for the villages where the HPM had strained or less friendly relationships, such as Kanyogoga and Makondo, pumps took longer periods to repair and women and children had to

bear with several months of no access to 'safe' water. The MMM also had their trusted HPM, whom they paid to repair the shallow wells they had constructed for free in the beginning, and when the CBM system started around 2007, contributions from the communities were expected before a pump could be fixed. The MMM's HPM also usually repaired the shallow wells promptly even when households had not raised the repair fees.

There are similarities between the findings of this study on the role of institutions such as WUCs and some research done in Uganda. For example, community mistrust of WUCs with their O&M or repair payments, a major cause of delayed pump repairs has been observed in Central, Northern and Eastern parts of Uganda (e.g., CREAM 2009; Kanyesigye *et al.* 2004; Socio-Economic Data Centre 2001). The failure of households to pay monthly O&M fees or repair fees as reported in this study corroborates with previous work in rural Ghana, where households from 23 percent of the villages also admitted that they were not paying any fees for water (Whittington *et al.* 2009:706). However, this study has been unable to adequately show that the HPMs could not be easily accessed, or that they were not trained enough, as demonstrated in previous research in various districts in rural Uganda (Socio-Economic Data Centre 2001; Kanyesigye *et al.* 2004; YODEO 2007, in Mommen and Nekesa 2010; Ademun 2009; CREAM 2009; Asingwire 2011; Nimanya *et al.* 2011). In Makondo Parish, the HPMs, who as noted above were all men were not far away, but the real issue was their relationships with local institutions or actors and the dynamism of the actors, especially the Village Chairpersons, WUCs and the water users. Perhaps this study then underscores the relevance of micro-level formal institutions in determining access to water by the poor. As noted by van Koppen *et al.* 2009, institutions such as Village leaders, WUCs and HPMs in the unique case of Makondo Parish should work together to address the water needs of the poor and vulnerable, especially women and children, who, as water fetchers are most affected by the failure of "improved" water points to provide water. Unfortunately, powerful as they are, institutions such as Village Chairpersons and HPMs are a reserve of men due to the disciplinary and normalising patriarchal gender order in the community; they are 'special positions' as described by Connell, and therefore allow men to control access to water in Makondo Parish. Akin to the role of formal institutions and authority in determining access to water is access to knowledge and information, the focus of the next sub-section.

5.2.3 Knowledge and Information Power

Access to certain forms of knowledge, such as beliefs, ideological controls, discourse (or 'true' discourses according to Foucault 1981) or the power to produce categories of knowledge through expert status acquired through access to privileged information, higher education or specialised training can shape access to resources, including physical access (Ribot and Peluso 2003:168-169). Braidotti *et al.* (1994:34) add that examining the 'knower', processes that determine and legitimate knowing, and what can be known helps in understanding the influence of knowledge, in this case in access to water.

In this study, some individuals' access to privileged information, and processes such as training on various aspects of water ('what can be known') influenced men, women and children's access in some ways. For example, the Village Chairpersons whom I have discussed in the previous sub-section, and who are mostly men, are usually the more highly educated persons in their communities and tend to get information quickly from highly placed individuals in government and civil society. They, therefore, easily get information on say, water technologies to be established or repaired by government, local water governance procedures or policies simply because they are the most respectable 'political and social heads' in their villages. It is this knowledge that gives these Village Chairpersons power and authority to influence access to water through their actions, decisions and relationships with, for example the WUCs.

Secondly, one of water users of the shallow well in Kayunga, a man, had done a lot of training on water given by the MMM's. Because of his knowledge of the socially understood rights; the policy stipulating the functions of WUCs; and his later work as a CHW, he often mobilised water users in his village and even kick-started the collection of repair funds whenever their shallow well broke down. He also alerted the Village Chairperson and the HPM (employed by the MMM's) after a certain amount of money had been raised through his efforts and those of some WUC members, so that the HPM would repair the pump. In this way, the water users had their water source fixed promptly and without the delays and several months of malfunctioning that characterised the situation in other villages. This significantly minimised the number of days that women and children from Kayunga village (and those from neighbouring villages such as Wajjinja and Kanyogoga) would have to travel to other villages or within these villages looking

for water. A similar situation was reported in Misaana village, where the shallow well's caretaker was more knowledgeable on the functions of a WUC, having been trained by the MMM's. He had also worked well with his fellow WUC members and the Village Chairperson. This caretaker lived close to the shallow well and would monitor the children that came to collect water, sometimes warning them against mishandling the pump. This could be one of the reasons why this shallow well, unlike many others in the Parish never broke down so often, as children were largely responsible for the misuse and eventual breakdown of pumps.

But having some training on water did not benefit all the villages. For example, in Kibuye village, where the Village Chairperson was also a CHW, the bore-hole broke down and could not be repaired for almost a year. The Chairperson admitted that he had failed to work with the WUC in mobilising the community, and that the water users themselves could not raise the fees that were required for repairing the bore-hole (estimated at UGX 90,000 or about €27). In addition, most of the water users (both men and women) had not received training on relevant aspects of water or water service delivery, such as the role of a WUC, operation and management procedures, cleaning water sources, and undertaking minor repairs, as stipulated in local water policies (e.g., GOU 2007; 2011a). As such, 79.3 percent of the responses from men in the survey indicated that they had not received any form of sensitisation or training on water, while the figure for women was 81.6 percent. Of all the 602 respondents, only three men and three women had received some training on minor pump repairs. This state of affairs was confirmed by two Key Informants, one of which was, in theory, responsible for training men and women on such aspects but could not because of insufficient finances and facilitation. He had this to say:

> *I know that I am supposed to monitor the improved water sources in all Villages and Parishes in the Sub County, and to train the communities, both women and men on maintenance of their water sources, hygiene and sanitation. But I am not able to do this work adequately because I do not have enough resources to move in every village, let alone mobilise the communities. In fact I do not have transport to help me move around.*
>
> (Male Sub County Key Informant)

Such training by this Key Informant could be beneficial in the long run, as they would enable poor women and men in villages to fix the water sources themselves without having to call on a HPM every time, especially for minor repairs.

Thus, some individuals' knowledge or access to information, the majority of whom were the more privileged males that occupied the key position of Village Chairperson in Makondo Parish shaped access to 'safe' water. When they did their job or used this knowledge, they improved access to water by, for example, facilitating functionality of pumps in some villages, which reduced the burden that many children and women faced. But the fact that the key person responsible for training women and men in Makondo Parish on maintenance of their water sources does not have enough travel supports highlights a critical gap in terms of financial resources required to ensure continued access to water. One then wonders whether other community-based financial mechanisms or payments improve both men and women's access to water.

5.2.4 Payments and In-Kind Community Contributions

As we saw in Chapter Three, financial mechanisms such as 'formal access fees' can mediate access to resources (Ribot and Peluso 2003). Franks and Cleaver (2007) add that in water governance, these mechanisms include payments for rights, 'payments for maintenance' or 'payments in kind' for water resources. In Makondo Parish, financial payments and payments in kind for water existed. I discuss the payments for physical maintenance of the pumps first.

Payments for Operation and Maintenance

The payment arrangements identified in this study were the formal O&M and repair fees set by WUCs that brought together the water users of a particular "improved" water point in each village, as also outlined in water policies (e.g., GOU 1999, 2007, 2011). The key social or gender-related issues in payment of the fees, particularly the consequences of failure to raise the fees and some Foucauldian acts of resistance and challenging of fixed relations owing to women's impediments and innumerable sufferings (Amigal and Pujal 2009) profoundly shaped access to water in Makondo Parish.

The ability to pay the O&M or repair fees determined functionality of "improved" water sources, and therefore women, men and children's ability to use them. In most of the villages in Makondo Parish, WUCs found it difficult to collect monthly O&M fees, even when they had agreed rules

or by-laws in place. The common practice was more of what I would like to call an 'instant-catastrophe' one, where the repair fees were only gathered whenever the pumps broke down. As a matter of custom, and being a patriarchal community, men, as bread winners, household heads and providers were responsible for paying the repair fees, with the exception of some *de jur* female household heads that paid for themselves. In the villages where some of the men (and few women household heads) paid the repair fees, such as Kayunga and Misaana, it took shorter periods for the pumps to be fixed, as their WUCs mobilised the water users to raise the funds, as earlier discussed in Sub-section 5.2.2. However, many men (or households in general) never paid the repair fees, an issue that was also highlighted in Chapter Five (Sub-section 5.2.1) as one of the major problems that survey respondents faced while collecting water from their main sources. This lead to denial of physical access to water sources for some women (including those from FHHs) and children. For example, only 38 percent of the survey respondents revealed that O&M or repair fees were paid by adult males or male household heads; another 30.6 percent mentioned adult females while 'nobody' accounted for 12.3 percent of the respondents. FGD participants and some Key Informants further explained that men declined to pay the fees because of their limited roles in domestic water provision, while others did not take payment of the fees seriously, leaving the women and children to find ways of providing water at home anyway.

> *It is difficult for men to spend money on water because they do not care about water at home. Even when our shallow well breaks down, they do not want to pay the fees for repairing it. As a woman, you have to look for money somewhere, such as the little you save from sales of some food crops to pay the fees so that you and your children are allowed to collect water from the pump.*
>
> (Female FGD, Misaana Village)

Men's unwillingness to pay repair fees was resounded in most FGDs. WUC members of Kibuye Village for example estimated that only 30 percent of the men in their village were willing to contribute the fees, compared to 70 percent for the women. One of the village Key Informants added:

> *Many men do not consider water as a serious issue, and that is why they do not want to pay the fees. The money is usually very little, about Uganda Shillings 1,000*[€0.30] *but they prefer to spend it on less important things like drinking a bottle of beer.*

(Village Key Informant, Kanyogoga)

Some men defended their refusal to pay the fees because they supposed that it was the responsibility of the providers of the pumps (government, local government officials, politicians or NGOs such as MMM) to fix them. For example, the WUC members for the bore-holes in Kanyogoga, Kibuye and Makondo Villages confirmed that men who refused to pay repair fees often retorted that it was the role of the government to repair their bore-holes whenever they broke down.

> *Whenever we ask the water users to pay the fees for repairing the bore-hole, men ridicule us. They say, we never used to pay for repairs of our bore-hole in the past.... government is supposed to pay for that....go and ask our councillor or contact our Member of Parliament.*
>
> (WUC Members, Kanyogoga Village)

> *The pumps were given to us by the Bazungu* [local name for Europeans, in this case referring to the Irish nuns of MMM]. *The Bazungu have always repaired our pumps, so why are you asking for money from us?*
>
> (WUC Members, Kibuye Village)

Here, men expressed their ignorance of the CBMS that requires contributions from the users of an "improved" water point for its construction, O&M and repair. Thus, the refusal by many men to pay the repair fees and the dependence of the communities on external support from MMM meant that women, as the providers of water at home had to 'resist' men's financial power by finding ways of paying the fees. Another act of resistance here stemmed from women and children from households that defaulted on O&M fees, who, for fear of being blamed or stopped from using pumps 'illegally' collected water from the less restricted "unimproved" water sources, as discussed in Sub-section 5.2.1. As we shall see in Section 5.3, denying defaulting households access to pumps also triggered illegal access as some individuals stealthily used the water pumps at night when the 'enforcers' or controllers, such as Source Caretakers were not able to regulate access at such awkward times of the day.

There are similarities between some men paying the repair fees for "improved" water sources (largely due to their privileged access to money compared to women) as observed in this study and work done in South Africa, where at least half of the study participants also confirmed that it

was men's responsibility to pay the fees for their households, with some complaining that the fees were high (Hazell 2010). The findings on consequences of failure to pay O&M or repair fees, such as the denial of women and children physical access to water resources, or the increase in the drudgery of fetching water also corroborate with what has been reported in East and Central Africa (e.g., Coles and Wallace 2005; Tukai 2005; Osinde and Turner 2007). The fact that women in Makondo Parish sometimes found money to pay for repair of pumps whenever their husbands refused is encouraging and could be viewed as a Foucauldian act of resistance, as most women in rural Africa tend to leave their husbands to make such payments (e.g., Ahlers 2002; Bennett *et al.* 2008). It may also be argued that refusal to pay the fees was not deliberate; perhaps many of the households could not afford the fees, especially if we consider the fact that spending on water supply should not exceed 3 percent of people's income (Bolt and Fonseca 2001). The repair fees of between UGX 1,000-3,000 (about €0.3-0.9) seemed to be less affordable for households in Makondo as most of them earned between UGX 10,000-50,000 (€ 3-15) a month, with female headed households in particular earning even much less as indicated in Section 4.4. Next is the question of how collective or community labour affected women and men's access to water.

Community Labour for Improved and Unimproved Water Points

As theorised by Ribot and Peluso (2003), the ability to 'labour for oneself' enables individuals to maintain access to a resource. This resonates with Coles and Wallace's characterisation of labouring as provision of communal labour which is direct (such as moving materials, building or digging pipelines); indirect (e.g., collecting money for running committees); or 'ancillary', such as preparing food for community labourers (2005:71).

Direct, indirect and ancillary forms of labour were observed in Makondo Parish. Direct communal labour usually came to sight whenever the communities organised themselves for constructing, repairing or cleaning both the "improved" and traditional water sources, locally known as *bulungi bwansi*. When asked to state their contributions towards safe water in their villages in the past one year, 'labour and materials for construction' accounted for 19.8 percent of the responses from the survey respondents. FGDs and IDIs revealed that there were nuanced gender differences in the performance of communal labour for both "improved" and

"unimproved" water sources. For example, carrying of materials such as bricks and gravel during the construction or repair of "improved" water sources was done by men, with women undertaking what were perceived as less energetic (ancillary) work in the form of cooking food for the males. The WUC members for the protected spring in Makondo Village and the Village Chairperson confirmed that men carried the gravel the last time the protected spring was re-lined following leakages of the wall near the concrete plinth. For the "unimproved" water sources, special days were allocated, once or twice a year, many times involving prior mobilisation of the communities for desilting the open wells and cleaning them especially at the end of the dry season. Similarly, men were more actively involved in the more vigorous activities such as desilting or removing materials from the beds of ponds and open wells and clearing the trenches or drainage channels. Women did 'lighter' work, such as picking rubbish around the open wells or slashing grass and surrounding bushes. In both situations, the more strenuous work was deemed inappropriate for women, and because of this women were largely excused from communal labour, especially for "unimproved" water sources. Men were said to brave the dirty muddy water and stand in the ponds or open wells with their trousers folded, something that the women could not do. These views were expressed in many FGDs.

These findings are consistent with what has been reported in various parts of Africa and the developing world regarding communal labour for water sources (e.g., Coles and Wallace 2005; Fonjong 2008; Makoni *et al.* 2004). Perhaps what this study has unveiled more clearly are the gender disparities in the performance of these roles and how they differ with the water technologies in question. We have also seen here that following from Foucault, individuals or male and female bodies acquiesce in the local stereotypes and expectations that tend to exempt women from the more strenuous direct communal labour activities (and therefore women's physical labour may not be completely exploited). However, women had to contend with yet a more arduous activity — fetching water, as illustrated in Chapter Six. Next comes the aspect of social identities and how they influenced access to water in the study area.

5.2.5 Social Identities

Following from Foucault (1977), power relations are concerned with the subject, modalities and practices. Likewise, modalities and practices of membership in a community or group, including

groupings such as gender, age, ethnicity, and status influence how benefits from resources are distributed (e.g., Young 1993; Kabeer 1994; Ribot and Peluso 2003:170-171).

In Makondo Parish, there were social groups differentiated by religion, ethnicity, social position, age, wealth or socio-economic status and of course, gender. Whereas religion and ethnicity did not appear to influence access to water as such, social position, age, wealth and gender were crucial. As discussed in Sub-sections 5.2.2 and 5.2.3, social positions (or 'special positions', Connell 2005), such as leadership and technical positions at geo-political and socio-political levels shaped men and women's access to water in various ways. Individuals such as Village Chairpersons and the HPM, all of whom were men, had power to control and distribute water in the community. Regarding age and social status, some social groups such as the disadvantaged, the elderly, the very poor (with little land and very limited or low sources of income), and the child-headed households accessed water due to some privileges that they enjoyed; for example, households of very old persons, some of whom were widows, were exempted from paying repair fees, which granted legitimacy to other water users access to "improved" sources. The exemptions were collectively negotiated and accepted by the water users together with their WUCs in the respective villages (such as Kanyogoga, Kibuye, Luyiiyi Kaate and Makondo), and this allowed individuals from elderly households unrestricted access to the "improved" water sources. Similar privileges were accorded to very poor households and child headed households, as reported in the villages of Kanyogoga, Kiganjo and Makondo. It should be noted here that the low socio-economic status of the disadvantaged or poor households also enabled them to benefit from water-related services and resources provided by NGOs. MMM's water and health activities often target widowed households, the elderly and vulnerable children for house improvement or construction, and provision of RWH technologies such as corrugated iron roofs or sheetings, galvanised sheet steel gutters, and storage tanks, or even water collection equipment such as jerry cans. This has improved access to safe water and household water storage for these groups of people. However, there are many widowed and elderly households in Makondo Parish, and given the shortage of resources available to the MMM's, this assistance has not reached many of these social groups. Apart from identities such as social position, age and socio-economic status, men and women's access to water was also shaped by intricate social relations.

5.2.6 Social Relations

As theorised by Ribot and Peluso, the negotiation of social relations, such as relations of friendship, trust, reciprocity, dependence and obligation influence access to resources (2003:172). These relations were manifest in Makondo Parish, as discussed below.

In Sections 5.2.2-5.2.4, we have seen that male-dominated formal institutions such as Village Chairpersons, WUCs, and the HPM 'invested in social relations' between each other, through friendship, dependence and obligation in ways that determined the functionality of "improved" water sources, and eventually shaped men and women's access to water. Also, payment of the repair fees depended on relations or negotiations between the water users, Source Caretakers or members of WUCs (who in essence controlled physical access) and the Village Chairperson, as well as identity, depending on subjectivities such as the socio-economic status or wealth of the households. For example, through negotiation, some households (including widowed or less wealthy male-headed households) were allowed to use the shallow wells or bore-holes even if they had less of the required repair fees for a broken-down pump or whenever they promised to pay in due course. For example, it was reported that a Source Caretaker denied a widow in Kayunga Village access to the shallow well, after the well had just been repaired with most households contributing UGX 1,000 (€0.30) each. This woman beseeched the Chairperson to allow her and her household members to use the well, saying she would pay the fees later, and her request was granted. Also, water users in the villages of Kanyogoga, Misaana, Makondo and Kibuye agreed to exempt the dependant or vulnerable individuals or households, such as the elderly and orphaned children (who had no sources of income or relied on a few friends and relatives for financial support) from paying the O&M or repair fees. This concern is also stipulated in the Water and Sanitation Sector District Implementation Manual, one of the key rural water policies. Sub-section 5.2.2 also illustrates how trust (and mistrust) of the WUC members can lead to better or less access to water by women and children respectively. Also, due to the the obligation, or responsibility thereof, of children, youths and women in water collection largely established how households obtained water and how, especially through physical labour for carrying water, moving with water loads for long distances and queuing, as elucidated in Chapter Six.

The above complex social relations have also been exemplified by many other studies described in sections 5.2.2-5.2.5. Thus, relations between Village Chairpersons, WUCs and the HPM are key to improving women and children's access to water. This study has also demonstrated that the burden faced by women and children in collecting water can be improved by better relations between these male-dominated micro-level water actors. Other than social relations, identities, labour, technologies and others that determined access to water in Makondo Parish, there were other interconnected property based mechanisms. These are considered in the next section.

5.3 Rights-based Mechanisms

Following up again on the propositions of Ribot and Peluso (2003), I discuss the mechanisms of access endorsed or attributed by law, custom and convention, or what Franks and Cleaver refer to as 'rights and empowerment'(2007:295). These include 'legal' or 'illegal' modes of access to water, both of which were discovered in Makondo Parish. I begin with the legal modes.

5.3.1 Legal Access

"'Socially accepted' circumstances, practices or locally understood entitlements confer customary or conventional access to resources for some individuals or groups" (Ribot and Peluso 2003:162).

Within Makondo Parish, customary practices established universal or unrestricted access to water to some individuals, while restricting others. For example, men, women and children in the Parish seemingly had universal physical access to all the unfenced (or 'untooled') "unimproved" water sources, including those that were individually owned, as the owners freely allowed every household member from their village or vicinity to use them. Certainly, observations at the open wells and ponds in the case study villages showed that most individuals, regardless of gender freely accessed these water points. Nevertheless, access to "improved" water sources was generally not communal. As we have seen in Sub-sections 5.3.2 and 5.3.4, pump breakdowns often forced WUC members (sometimes together with Village Chairpersons) to demand repair fees from households that used the "improved" water sources in question. Female FGD participants and some survey respondents (e.g., in Kayunga, Kibuye and Kiguluka villages)

confirmed that WUC members would sometimes stand at the water points to stop children and women from defaulting households from accessing the pumps.

Previous findings on customary entitlements to water in rural developing communities are few. For example, just like in this study, many rural developing communities in Africa, Asia, and South America have been found to have established common rights to "unimproved" water sources such as ponds or rivers (Crow and Sultana 2002: 711; Cleaver and Toner 2006; Slaymaker and Newborne 2007; van Koppen *et al.* 2009). Previous studies in Uganda also indicate that some community members do not pay O&M fees and are always at odds with their WUCs (Kanyesigye *et al.* 2004; GOU 2009); but they do not clearly state how entitlements play out per water technology, and they only provide sketchy evidence on the exemption of vulnerable individuals such as women and the elderly from the fees through local entitlements. Other studies on access to water in rural areas in other developing communities report that whereas some individuals may not pay O&M or repair fees, the little money got in addition to that sourced from outside communities keeps the "improved" water systems functioning, hence granting almost everyone in the community access without many restrictions (e.g., Whittington *et al.* 2009:707). The next sub-section attends to property rights and how they influenced access to water.

Local Property Rights

Law-based and government-backed property rights such as 'the holding of titles or deeds of real property, permits and licences' determine who can lay claims to a resource (Tawney 1978:141 and Nelson 1986, in Ribot and Peluso 2003:162). In Makondo Parish, the holders of land titles on which "improved" water sources were located, most of whom were men, influenced who benefited from water sources.

The owners of land where water points were located (or the 'landlords' as they are sometimes called) were reported to have voluntarily and freely offered their land for the construction of the "improved" water sources. However, some land owners occasionally restricted community members from using the water sources, either deliberately or using 'authority'. Deliberate restricted access was evident in one village, where the man who owned the land on which a bore-

hole was constructed denied the community physical access to the pump, citing their failure to raise repair fees. Some female water users complained that the land owner used his position as the Village Chairperson to include members of his household on the WUC (a man and a woman), and ensured that they occupied the 'influential' positions of Caretaker and Treasurer respectively. These two individuals were said to be unfriendly and that they 'mistreated' other water user. For example, the Treasurer (who doubled as the wife to the land owner) was said to have routinely confiscated jerry cans from children who were from defaulting households, yet the land owner/Village Chairperson was the only person who could solve such grievances in the village. Consequently, many water users decided to discontinue using the bore-hole, opting for other water sources in their midst, mostly the traditional or "unimproved" sources. A similar example related to social relations discussed earlier occurred in another village, with bad roads and risks of assault discussed in Sub-section 5.2.1 and Chapter Six respectively playing a part in determining women and children's physical access to an "improved" water source. It was reported by survey respondents and a Parish Key Informant that a mentally disturbed man (who was also a son to the land owner) lived near the bore-hole that was regularly used by women and children, and that this man occasionally threatened to attack them when they visited the water source. Because of the land owner's position and friendly relations with the Village Chairperson, women's complaints to the latter about the mentally disturbed man 'fell on deaf ears'. Generally, most of the holders of land titles on which the pumps in Makondo Parish were constructed were men, who sometimes used this reinforced power to deny women and children access to the water sources.

These findings seem to support the ideas of Crow and Sultana, who, based on their work in rural Bangladesh, noted that new technologies 'confer new property rights to men' and, again, land rights establish water rights (2002:716-717). In the current study, established water rights for men, particularly the land lords who own the land on which water sources are built, restricted women and children's access to pumps. This is also true for most parts of rural Uganda, where men are the owners of land and have more say and control over its use. This study has also shown that local land rights in Makondo Parish interact with other modes of access or sources of power, such as landlord status, formal village institutions (that is Village Chairpersons) and social relations and perhaps payment of repair fees to influence access to "improved" water

resources. Local property rights conclude the legal modes of access to water that were observed in Makondo Parish; we now turn to the illegal modes.

5.3.2 Illegal Access

Following from Ribot and Peluso, unconventional behaviour by individuals in order to gain, control and maintain access to resources, or 'rights-denied access' occurs through acts of theft, which may include the use of 'overt force' or the threat of force and 'stealth deception' (2003:164). In Makondo Parish, there were acts related to the use of overt force and stealth behaviour that deprived women, men and children of the benefits of their daily use. I will start by examining overt force.

Overt Force?

In Makondo Parish, unconventional behaviour towards water resources, in the form of overt force was reported. Survey respondents and male and female FGD participants reported that some community members, mainly men who failed to pay repair fees reportedly used pumps at awkward hours of the night, usually after 8pm or early in the mornings at 5am, when the 'authorities', in this case Source Caretakers (or other members of WUCs) responsible for regulating use or restricting physical access were unable to stop these 'forceful' community members. The defaulters were encouraged by the lack of technologies or tools such as pole-fences and padlocks (some of which existed in the past but had been vandalised) that restrained access to these pumps at certain proscribed times. As a result, the defaulters visited pumps at night, in the hope that the Source Caretakers or members of WUCs – the 'controllers of access'- could not easily identify them or even stop them from using the water sources. These acts were reported at the bore-holes in Kibuye and Kanyogoga villages and the shallow well in Misaana. An interesting scenario emerged from the Kibuye bore-hole, which was repaired at the time this study was going on, with each household contributing at least UGX 1,500 (€ 0.45) towards the repair fees. The HPM agreed to repair the bore-hole upon receiving half of the money that was required, in the hope that the community would raise the balance in due course. The Caretaker, an elderly woman in her 60's (and perhaps the only woman to occupy this position in the whole of Makondo Parish) whose home was close to the bore-hole was vigilant during the day and tried to collect contributions from many households that sent their children to collect water from the

pump. However, when the Caretaker took off a few days to visit some relatives, some individuals (especially men and male youths) from defaulting households took advantage and used the pump at unsanctioned hours, some as early as 4am, when other more distant members of the WUC could not stop them. Related acts were also reported in the villages of Kayunga and Kanyogoga at the shallow well and bore-hole respectively.

Stealth Deception

Again, Ribot and Peluso contend that 'stealthily using deception', an illegal form of access to resources occurs through cultivating relations with those who control access to a resource, so as to by-pass the stipulated norms and rules.

In Makondo Parish, some individuals cultivated relations with 'controllers' of access to water so as to benefit from it even when they did not do what was socially sanctioned, such as paying repair fees. For example, stealth deception was inadvertently used by individuals who were friends of the controllers of access, or conversely by the Village Chairpersons or WUC members themselves. For instance, survey respondents and female FGD participants from the villages of Kibuye, Makondo and Misaana reported that some community members were friends of the Village Chairpersons and their household members were never disciplined or denied physical access to "improved" sources even when they had not paid the O&M or repair fees. Others who were given similar treatment were simply 'political friends' or persons who subscribed to the political beliefs of their Village Chairpersons or the Source Caretakers/Chairpersons of the WUCs, who of course controlled access to water. Such individuals, many of whom were male household heads, never paid repair fees and WUC members were more lenient with their female and child household members, allowing then to use the pumps at anytime even when money was needed to repair the pumps or pay for earlier repairs.

There was also what I would like to call stealth behaviour or 'direct physical theft' that involved the stealing or vandalising of parts of the water pumps, especially those from broken-down or malfunctioning pumps. This was said to have been done by male individuals in the community who wanted to make financial gains from the pumps, some of whom were rumoured to have

been conniving with HPMs[24]. Some malfunctioning pumps in the villages of Makondo and Kiganjo were seen without some major parts, such as the handle, chain, head assembly, and sprout. Cases of vandalism were also reported in the villages of Kiguluka, Misaana and Kayunga, with some of the FGD participants blaming defaulting households for breaking the padlocks that were usually put on the pumps to control access after the expiry of the agreed times for using the pumps. Either way, the stealing of pump parts or vandalising them only worked to deny mainly children and women (the water fetchers) the benefits of using "improved" water sources as replacing the parts took even longer periods for the pumps to function again. It also increased the burden of fetching water on children and women, who would again have to move longer distances to get water from non-vandalised and functioning "improved" sources in neighbouring villages. Female survey and FGD participants from the villages of Kiganjo and parts of Makondo where pump thefts were mentioned (and those from Kibuye and Kanyogoga where thefts were not reported but had malfunctioning bore-holes) expressed their unhappiness over having to get safe water from more distant sources, as explained in Chapter Six, Section 6.3.

The findings on stealth behaviour through vandalism or theft of pump parts are in agreement with those of Asingwire (2011) and Kanyesigye *et al.* (2004:13), who also reported thefts of pump spare parts in parts of rural Uganda, mainly due to the remote locations of the pumps or their locations far from households. However, men's use of stealth behaviour and deception to gain access to water, through by-passing payment of repair fees due to the good relations they cultivate with Village Chairpersons, Source Caretakers and Chairpersons of WUCs has not been reported in earlier studies, many of which simply cite 'communities' failing to pay the fees due to poverty, mistrust of WUCs among others, as discussed earlier in this Chapter.

In summary, access to water in Makondo Parish is intricate. A number of social or relational and rights-based mechanisms shape women, men and children's access to water. Crucially, gender relations and inequalities are evident in most of the mechanisms, with women and children, the traditional water collectors more vulnerable.

[24] Parish and Sub County Key Informants, *pers. commn*.

5.4 Conclusion

In this chapter, I have mainly used Ribot and Peluso's theoretical framework to explore the social/relational and rights-based mechanisms of access to water in Makondo Parish, and their gender implications. The dispersed nature of power in water governance and its various social hegemonies and struggles (Foucault 1978, 1981) at a micro political level are seen in the social and rights based mechanisms of access that emerged from Makondo Parish. Under the social modes of access, I have shown that both "unimproved" and "improved" water technologies exist in Makondo, and that men and women's rights to access water differ for each of them. The restrictions on physical use of "unimproved" water technologies are fewer for men, women and children as access is more communal; it is only the norms related to the maintenance of the technologies that are gendered, with women having fewer roles in the provision of communal labour. However, the big issue here is that access to "improved" water sources is more formal, and when the formalities are not followed, the arrangements hamper women and children's access to safe water. Payment arrangements, particularly O&M and repair fees largely deny vulnerable children, youths and women physical access to water resources, particularly whenever the male household heads do not pay the fees, saying the government or water technology providers are responsible for undertaking pump repairs. As the more privileged group, men have more access to money than women, yet the former do not want to use part of their money to pay O&M or repair fees. Perhaps another key aspect here is affordability in relation to people's income. In a poor community where household incomes, especially for female-headed (and child-headed) households are as low as UGX 10,000 or €3 per month, and repair fees of €0.30-0.6 are more than the 3 percent threshold proposed by Bolt and Fonseca (2001), women's access to "improved" water sources remains uncertain as they cannot afford the fees. The major formal institutions - Village Chairpersons, WUCs, and the HPM are male-dominated, yet they hold a lot of 'legitimate power' or authority, knowledge and information, and they use these to influence the functionality and availability of water at "improved" water sources and who accesses them, sometimes in ways that restrict women and children from disadvantaged households. The rights-based mechanisms such as local entitlements can work to ensure that only a handful of vulnerable women and children access water; property rights favour men, who own the land where the water sources were constructed, while illegal actions or behaviour granted more access to men.

All in all, this case study has shown that Ribot and Peluso's theory is useful in identifying the social and rights-based mechanisms of access to water. However, Ribot and Peluso's framework did have blindness with regard to gender. The mechanisms of access, particularly formal institutions and payment arrangements are significantly gendered due to patriarchal privileging in Makondo Parish, and are affected by the rather overlapping gender relations, which limit women and children's access to safe water. The next chapter looks at yet another requisite form of access - water collection, particularly the chores that children, youths, women and men go through to obtain water.

Chapter Six: The Drudgery of Water Collection[25]

6.1 Introduction

This Chapter explores water collection in Makondo Parish. Based on the ideas of Coles and Wallace (2005) and Franks and Cleaver (2007), I view water collection as a socially constructed activity that involves providing labour, or 'free' physical labour, so as to enable individuals to access water. I analyse the burden of fetching water more broadly, beginning with the more 'conventional' aspects of the labour, such as responsibility for water collection at the house-hold level (in which I also use Foucault's notions of docile and productive individuals or bodies and resistance), distance travelled to and from water sources, and time taken. Here, I assume a collective model of a household and examine men, women, male and female youths, boys' and girls' responsibility for providing water in households, showing the influence of gendered cultural norms on these groups ability and willingness to fetch water. I also consider distance as a key social measure of water collection by taking into account the estimated expanse in kilometres, converted from the locally more popular miles, that woman, men, youths and male and female children moved daily from their households to their water sources. I demonstrate how factors such as "improved" water source functionality and physical location of water sources influenced the distances travelled to water points. The time spent collecting water, an important measure of the real burden of water fetching, was also examined. Unlike in most studies where this time has been 'combined', I critically look at other issues such as the daily trips made by women and children, the main water fetchers, and the time spent drawing water. I also go on to scrutinise other critical social processes in water collection that emerged from the study, such as queuing at "improved" water sources; how water is transported and by whom and the self-reported health effects; assault or risks of assault; and contamination, another social health issue and how these affected men, women, male and female youths, girls and boys. I conclude that water collection is a gendered activity that is burdensome, time consuming and risky, and that the real burden falls on young children, female youths and women.

[25] Part of this chapter has been published as: **Asaba, Richard B.**, G. Honor Fagan, Consolata Kabonesa and Firminus Mugumya. 2013. "Beyond Distance and Time: Gender and the Burden of Water Collection In Rural Uganda". wH2O: The Journal of Gender and Water 2(1): 31–38.

6.2 Water Fetching: Whose Responsibility?

Following their theorisation of water governance outlined in Chapters Two and Three, Franks and Cleaver (2007) contend that human capacity enables and constrains access to water, including 'physical embodiment'. Water collection, a culturally determined practice is a form of physical labour (Crow and Sultana 2002; Franks and Cleaver 2007:301) and the responsibility of fetching water in most rural households is gendered (Coles and Wallace 2005; Roy and Ben 2004). According to Foucault (1977), individuals, bodies or men and women in disciplinary (water fetching) situations may acquiesce in power, rendering their bodies docile and productive.

In Makondo Parish, fetching water was clearly dictated by gendered cultural norms. Therefore, for the purpose of this section, a collective model of a household was assumed, in which different male and female individuals negotiated and bargained in order to have access to water (Ray 2007:426). The household members were categorised into six gender groups: adult males; adult females (many of whom were aged above 24 years); male children; female children (both as minors aged between 5 and 17); male youths; and female youths (adult children or household members aged between 18 and 24 years). Asked to state who was responsible for collecting water in their households, over half of the respondents (54%) confirmed that it was adult females, followed by female children (19.1%). About 9 percent of the respondents said that adult males collected water; 5.6 percent said female youths, while male children scored 5.6 percent. However, information from FGDs, IDIs and PO (at both "improved" and "unimproved" water points) showed that due to cultural norms, female and male children aged 5 to 15 were more involved in water collection compared to adult males and youths in general. During the PO sessions, children were seen visiting the water sources many times a day, especially in the morning (6–7:30 a.m.) and in the evenings (5–7 p.m.). The children had to balance their water collection time between attending school and performing other household chores such as washing utensils, although their mothers sometimes helped them with the latter.

Women also fetched water, but their more physical involvement depended on two key factors: availability of children (biological or not) under care in their households; and (for married women) the 'stage' of their marital relationship irrespective of whether they were permanently married or cohabiting. Women in households with children were less involved in water

collection compared to those that had no children, as the former often left the task to children except in circumstances when children were very sick or at school. Whenever children were fetching water during the day, these women concentrated on other productive tasks, such as cooking, cleaning and washing, as confirmed from survey respondents, FGDs and IDIs with village and Parish officials. As for the women without children[26], water fetching was not only a daily activity, but a more arduous one. They collected water two to three times a day, carrying heavy loads of up to 20 litres (L) of water for every trip to the water points. With regard to the stage of their relationships, women who had just got married or were in early days of cohabiting with their male partners were less involved in fetching water. Some female FGD participants disclosed that these women were excused from the activity by their husbands or partners who either bought water from vendors (particularly for couples that stayed in or near trading centres) or thought stopping the women from collecting water would minimise the chances of them being coveted by other men as they moved to the water points.

> *Some young women in trading centres like ours do not fetch water because their husbands* [or partners] *give them money for buying it from water vendors.*
>
> (Female FGD, Kibuye Village)

> *...men may not want to see their wives collecting water simply because they are jealous or protective. They think that when their wives walk to the distant water sources, other men will try to covet or seduce them along the way*.
>
> (Female FGD, Makondo Village)

In the main, due to the patriarchal order, especially the privileges accorded to them, men's involvement in fetching water for household or domestic consumption in the parish was uncommon. The few men who collected water had just married; did not have children or partners; had sick wives or children; were domestic workers/household helps; were workers at construction sites or were making bricks; were water vendors; or simply did it to earn quick income. These views were expressed by some male and female survey respondents. For example,

[26] As indicated in Chapter Four, youths were children aged between 18–24. Some of these women had youths in their households but they were rarely at home, or were married and could no longer fetch water.

a male respondent from Kayunga village said: "*If you see a man collecting water, it means he has just married his wife or that him and his wife have no children"*. Some FGD participants also seemed to affirm these beliefs:

> *Our husbands do not fetch water for use in our households because that is not their responsibility. They can only fetch water as an odd job or if they are going to be paid for it*.
>
> (Female FGD, Misaana village)

The use of domestic workers to collect water in Makondo Parish was also confirmed but was only common among the few wealthier households, such as those that had an estimated monthly income of above UGX 300,000 (€91).

Returning to men's collection of water for quick financial gains, some men collected water for making bricks, and most of them got it from "unimproved'' water sources because brick making did not require 'safe' water. A number of these men were seen at the open wells and ponds carrying loads of up to two 20L jerry cans by hand or six jerry cans using bicycles. The men who collected water for money (or water vendors, who charged their clients UGX 300–500 or (€ 0.09–0.15) for a 20L jerry can of water) were found in villages with trading centres, many of which that were located along the main Parish or Sub County road, such as Makondo, Kibuye and Luyiiyi Kaate, where they had a market, or 'water buyers'. There were no female water vendors in the villages as this was deemed to be too strenuous an activity for women; most of them were men, one of whom was of advanced age but had stopped vending water a few months before this study commenced. As revealed in one of the FGDs:

> *We have never had a female water vendor in our* village*. Originally we had two water vendors: a young man and an elderly man in his fifties. But the elderly man retired about two years ago due to health problems and advanced age. A woman cannot be a water vendor because pushing a bicycle requires a lot of energy* [caloric expenditure] *that we do not have. Only men can do that.*
>
> (Female FGD, Makondo Village)

One of the Parish Key Informants also highlighted this state of affairs, arguing that whereas men desired to fetch water for financial gain, they could do it for many other purposes and that to him, it was not shaming:

> *It is true that very few men collect water in this Parish, may be only 5 percent. I see no shame with a man collecting water.....for example, when we have*

> *ceremonies like parties or funerals, men actively collect water. And it is men who collect water for money* [water vendors]; *there is no woman who is vending water. If collecting water was a taboo for men, they would not be collecting water, not even for money.*
>
> (Male Parish Key Informant)

However, despite the above Key Informant's views, FGDs verified that traditional patriarchal norms and stereotypes excluded men from fetching water for domestic consumption, saying it was a role for women, since women were 'always at home'. It was often deemed unusual, shameful, demeaning, inappropriate and 'unmanly' for a man to collect water, especially on a daily basis. Some survey respondents and women in FGDs supposed that men who collected water were ridiculed by other men, who wondered why they undertook such a 'feminine task' and even urged them to stop doing it or else they risked fetching water in their homes for the rest of their lives. Some men also taunted their fellow male water fetchers, saying that they were 'charmed'. A female survey respondent from Kanyogoga village alleged: *Some men tell their* [male] *friends who collect water that you....you must be bewitched, how do you collect water every day as if you do not have a wife?* Similar opinions were raised by other women in FGDs in the villages of Makondo and Kibuye, and male FGD participants from Misaana village. Also, some female FGD participants alleged that a man who fetched water daily was deemed to be 'emotionally unstable', 'having something wrong in his head' or 'nearly mad'. For example:

> *If a man fetches water every day and yet he has a wife and children, we might suspect that he has something missing in his head; he could be mentally deranged*
>
> (Female FGD, Makondo Village)

In addition, men reportedly collected water only during long or harsh droughts when access to water became very difficult for women and children. During long droughts, some "improved" and "unimproved" water sources in the villages surrounding Makondo (especially Misaana, Luyiiyi Kaate and Micunda) broke down or dried-up, forcing men and some women and children whose households were not far away to queue at the protected spring in Makondo Village. Some men moved long distances with jerry cans and bicycles to available or functioning water sources within and beyond Makondo Parish in a desperate attempt to secure water for their families. Survey respondents and FGD participants also reported that a terrible drought in the late 1990's

saw men coming from as far as the neighbouring Rakai District[27], some with pickup trucks and other vehicles to collect water from the spring.

This study's findings on the responsibility for water collection falling on children and women are consistent with research done in developing countries in Asia (Crow and Sultana 2002; Bennett *et al.* 2008) and Africa (e.g., Nyong and Kanaroglou 1999; UNDP 2006; Banda *et al.* 2007; Ray 2007; Arouna and Dabbert 2010; WHO and UNICEF 2010a). This research has also demonstrated that due to patriarchal norms or 'freedoms' (Connell 2005), men rarely collect water, and that they only get involved during social or environmental crisis-related times, a scenario that has been confirmed in earlier research (Crow and Sultana 2002; Dey and Ali 2010) or when they have just married and have no children in their households to collect water (Geere *et al.* 2010). Some studies in Southern Africa also observed that men collect water in order to get income (Mazvimavi and Mmopelwa 2006:718; Hazell 2010). A point to note in this study is that social factors such as proximity to a trading centre, socio-economic status, having children in a household and early stages of marriage or relationships reduce the burden of water collection on some women, but again transfer it on young children, who may miss school or go to school late. Furthermore, women (and children's) higher involvement in water collection in Makondo Parish and their belief that married men should not fetch water reflects Foucault's idea of acquiescence or docile and productive bodies under a gendered and patriarchal inspecting gaze, and O Grady's (2005) idea of women self –policing and viewing themselves with a hostile lens. Thus, it is because of the gendered and normalised order or 'historical practices' that women accept the heavy responsibility of providing water in their households. At the same time, women's transfer of water fetching on children in their households and their refusal to fetch water in some instances could also be seen as acts of resistance against male domination and attempts to free themselves of the struggle and sufferings they undergo while fetching water (e.g. Amigal and Pujal 2009). Understanding the social burden of carrying water also requires assessing distance moved, the time it takes and 'caloric expenditure' or energy used (Geere *et al.* 2010; Sorenson *et al.* 2011:1525). I will now look at each of these factors and how they increase the burden of water collection, beginning with distance.

[27] almost 50 km away

6.3 Distance to Water Sources

Distance is one of the key social measures of the burden of water collection in developing communities, and is usually determined by taking into account the expanse in metres, kilometres or miles that women, men and children move from their households to water sources (e.g., WHO and UNICEF 2000, 2010a; Bimla *et al.* 2003; Sorenson *et al.* 2011:1524).

The majority of the survey participants in Makondo Parish (25.3% of the responses as discussed in Chapter Five, Sub-section 5.2.1) complained that their water points were 'too far from their households'. This was one of the major problems they faced in collecting water especially from the fewer "improved" sources. I then asked the participants to estimate the distance from their households to their main water sources in the more familiar unit (mile),which I converted to kilometres (km) using the standard of 1 mile=1.6 kms (Taylor 1995). About 22 percent of the survey respondents said their households were located at least 2 kilometres or more from their water sources (Figure 6.3), while the majority (41.5%) said their main sources of drinking water were "unimproved" sources such as open wells and ponds. These sources were said to be closer to households; were more reliable; and did not require the payment of maintenance fees common with "improved" sources whenever they broke down.

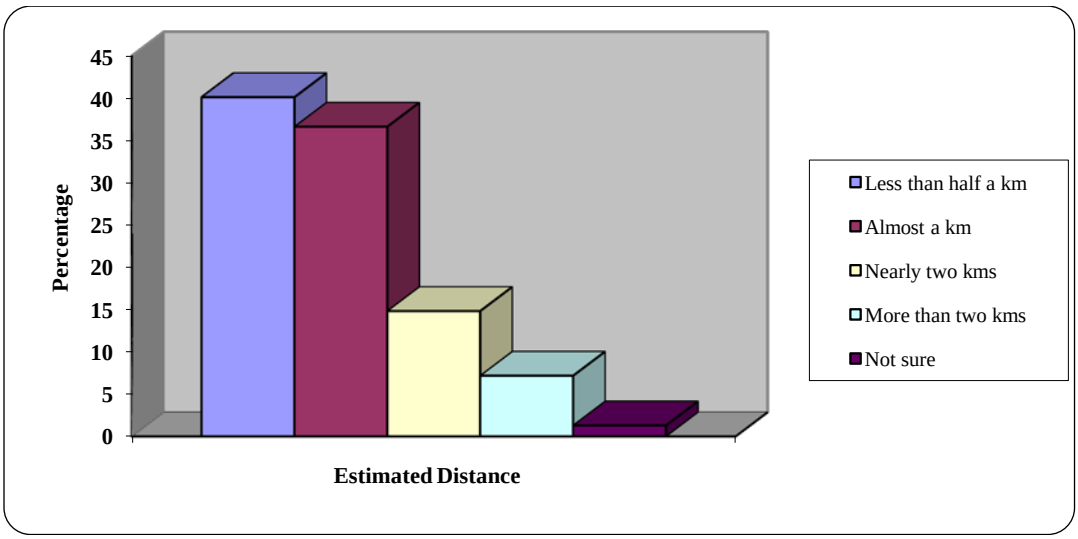

Figure 6.3. Estimated Distance from Households to Main Water Points *(n=596)*

Due to the wide-spread "unimproved" water sources and shortage of resources, additional GPS data was collected for only the few functioning "improved" water sources in the four case study

villages. This data revealed that the average distance was 0.8km, with Misaana village recording the longest distance (1.48 km) relative to its comparatively bigger size, and Kibuye the shortest of 0.18km because its borehole was located in a trading centre where most of the sampled survey respondents lived. Makondo and Kanyogoga villages had averages of 0.96 and 0.59km respectively. Thus, while households in three of the four villages were within the 1 km limit set by WHO and UNICEF (2000) and the 1.5 km limit for Uganda[28] (GOU 2007), the communities complained of 'long distances' as a major impediment to their access to water. For example, Misaana village, which recorded the highest distance of 1.48kms, was locally divided into two: Misaana A and Misaana B. There was only one functioning "improved" water source (a shallow well) located in Misaana B and at it was located at the extreme end of the village. Consequently, the majority of children, women and a few men from various households in the village, both from Misaana A that was furthest from the shallow well and Misaana B had to move for almost a km or more to collect water from the water point. Makondo village was also big, and had the largest number of households in the entire Parish. But the most popular water source, the protected spring (used by 35 percent of the respondents in Makondo village alone and by people from other villages such as Luyiiyi Kaate and Micunda) was located in a valley far from the largest cluster of settlements, which explains the average distance of almost 1 km. Thus, whereas distances to both the "improved" and open sources in the whole Parish were long, other factors such as "improved" water source functionality and physical location of water sources were equally important. For example, shallow wells, the most common "improved" water technologies in the community were mainly located in valleys, while most households were concentrated on hillsides/hilltops and more raised areas not close to the water points[29], making such a terrain exhausting for the water fetchers.

This study's findings on distances covered by children and women to and from water sources are in harmony with earlier observations in parts of rural Uganda (Sugita 2006) and Western, Central and Southern Africa (Thompson *et al.* 2001; Arouna and Dabbert 2010; Arku 2010;

[28] Access to water in Uganda is defined as the ability of households to use 20 litres of water per person per day from an improved source that is not more than 1.5 km away from their dwelling.

[29] Also, some of them were close to "unimproved" sources, as was observed around the protected spring in Makondo village and the shallow well in Kibuye village.

Geere *et al.* 2010; Hazell 2010), where similar distances and even longer ones of between 4 to 8.9 km were covered by women and children (Nyong and Kanaroglou 1999; Mazvimavi and Mmopelwa 2006; Sugita 2006:532; Banda *et al.* 2007). However, this study has demonstrated that distance or proximity influenced the choice of water sources, but local contextual dynamics such as size of the village, functionality of "improved" water technologies, environmental factors such as hilly roads and 'reliability' led to households' reliance on "unimproved" sources. Hence, this study examined social and gender-related factors other than distance so as to depict the true social-contextual realities and problems encountered in collecting water. Time spent in moving to and from water sources was one of them, as examined in the next section.

6.4 The 'Time Burden' of Water Collection

The time spent collecting water, or 'time burden' encompasses the time spent in moving to a water source, drawing the water and moving or walking back home (Coles and Wallace 2005; Ray 2007; WHO and UNICEF 2010; Sorenson *et al.* 2011) and is central in understanding how people obtain water (Roy and Crow 2004:1), the real burden of fetching water, and the value of time spent to rural households in the developing world (Whittington *et al.* 1989; Arku 2009:234; Boone at al. 2011).

In Makondo Parish, the long periods taken while fetching water were cited as major impediments to women and children's water collection routines. Foremost, the combined time spent moving to a water source, drawing water and returning home in Makondo Parish varied with gender group and age. The survey revealed that whereas the very few male water fetchers spent only 10 to 30 minutes per single trip collecting water from their main water sources, most of the women, male and female youths and children spent between 30 minutes and one hour (Table 6.4). Thus, as shown in Table 6.4, more female and male children and youths in that order spent more than one hour collecting water per trip, compared to the men and women. While factors such as varying distances to water sources or water collection times were perhaps also responsible for the gender differences in water collection periods, ethnographic observations revealed that most men, for example spent less time because they often used bicycles, yet women had no access to them, as indicated in Section 6.6.

Table 6.4. Approximate Time Taken to Collect Water from Nearest Water Point by Gender Group *(multiple responses, n=602)*

	Time Taken (%)					
Gender Group	<10 mins	10-30 mins	30 mins-1 hr	1-2hrs	2-3 hrs	> 3 hrs
Men*	7.8	45.3	29.6	13.4	3.9	-
Women**	4.3	33.5	42.4	17.4	2.4	-
Female Children***	2.1	14.8	38.1	31.5	12.5	1.0
Male Children****	1.8	14.3	39.0	32.1	12.2	0.6
Female Youths*****	3.9	16.1	45.8	26.5	7.1	0.6
Male Youths******	3.6	27.7	35.0	29.2	4.4	-

Source*: Field findings, July – November 2011*; *n=179; **n=373; ***n=289;****n=336;*****n=155;******n=137

Observations further revealed that some female youths and children carried water loads that were too heavy for their age (e.g., 10-11 year olds carried 10L jerry cans and some 13-15 year-olds 20L, see Section 6.4), a fact that was raised by women in FGDs. This, combined with and uneven roads and paths in a way made children them spend longer time periods while fetching water. Another cause of increased time was that many children aged between 5 and 10 played a lot *en route* to the water sources, especially at the "improved" water points whenever they found queues, a practice which helped them to relax while queuing as explored in Section 6.5.

Previous studies on time spent moving to, drawing water and returning from water sources combined also confirm that women and children spend several hours a day performing these activities. In rural Uganda (UNDP 2006:4) and parts of Africa (e.g., Mazvimavi and Mmopelwa 2006:718), women spend an average of 1-2 hours a day and children 3-6 hours collecting water, similar to what was observed in Makondo. Some earlier observations in rural Kenya have also shown that children could be spending more hours collecting water because of playing at the water sources (Roy et. al 2005:4). However, this study's findings contrast with earlier research which indicated that rural women in some parts of the developing world spend even more hours a day collecting water. For example, rural women in Southern and Eastern Africa spend an average of more than 2 hours a day collecting water compared to children (Boone *et al.* 2011; Roy *et al.* 2005:3). In some parts of Africa and Asia, women and female children spend double or thrice the time recorded in Makondo depending on the season (15–17.5 hours, e.g., Banda *et*

al. 2007; Crow and Sultana 2002:712; Neto and Tropp 2000:233; Nyong and Kanaroglou 1999). I will now move on to the trips individuals made to the water sources.

6.4.1 Daily Trips

The number of trips made to water sources is one of the processes that constitute the time burden of fetching water (Sorenson *et al.* 2011:1525).

Thus, to further explore the time that individuals in households devoted to water collection, I looked at the daily trips they said they made to their water points. The survey respondents were asked to state the number of daily trips made by men, women, male and female children and youths in their households to their nearest water sources. The householders reported that all the gender groups mostly visited their nearest water points one to two times a day (Figure 6.4.1).

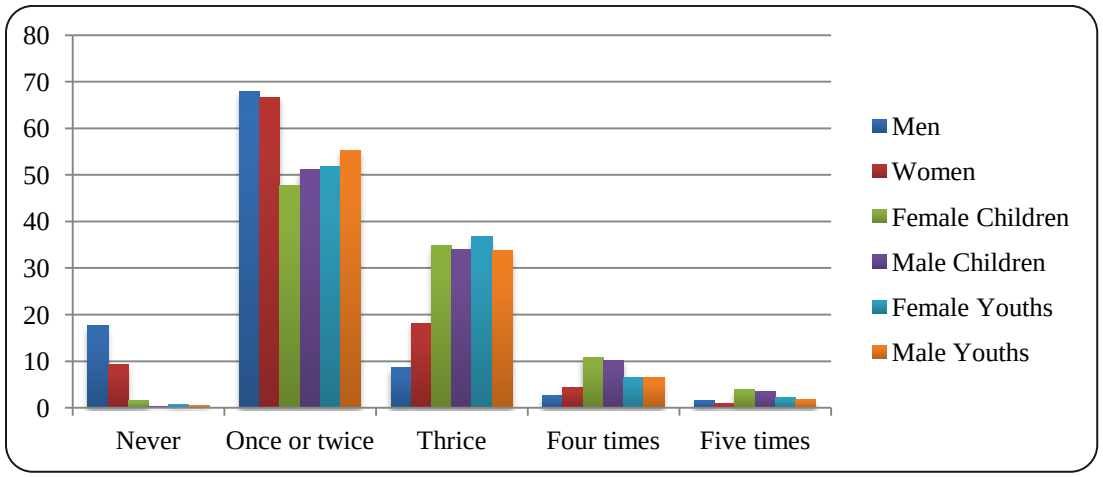

Figure 6.4.1. Daily Trips to Water Points by Gender *(multiple responses, n=602)*

Although Figure 6.4.1 shows that nearly 70 percent of the men visited water sources once or twice daily, the reality was that only a few men that were regular water fetchers (such as water vendors and domestic or construction workers) visited the water sources several times a day, as observed earlier in this Chapter. Other men collected water only on some specific social occasions. For example, during the participant observation sessions in Makondo Village, some men were seen in groups making trips to the protected spring to avail water for a household that was hosting a traditional give-away ceremony; men also made two or more trips to the bore-hole in Kanyogoga Village to avail water for a funeral in the nearby Wajjinja Village. Figure 6.4.1 further shows that the highest number of trips to water sources (four or five times a day) were

made by female children, followed by the male children. Thus, children made more trips a day to water sources than any other group, a trend that is in line with what was observed in the PO sessions.

Very few studies have been undertaken on trips made to water sources. Nevertheless, this study's findings are perhaps similar to what has been reported in Eastern Uganda, where over 95 percent of the trips to water sources were made by children and women combined (Sugita 2006:531); and in India, where women made 2-3 trips per day (Joy and Paranjape 2005). What stands out in the current study is that female and male children made more trips to the water points than women. Other than the number of trips that household members made to the water points, another indicator of the time spent in collecting water was the drawing of the water itself from the water points.

6.4.2 Drawing Water

Drawing water from water points can also increase the time burden of water collection (Coles and Wallace 2005; Franks and Cleaver 2007). This time involves the process of filling the water containers, which also incorporates processes such as 'conventions of queuing' or lining up at water points (Franks and Cleaver 2007:301).

The observations made in the four case study villages in Makondo Parish revealed that women and children waited a little longer to fill their water containers at the water points. The process and time spent by women and children while drawing water from "unimproved" water sources was to a great extent shorter than that spent at the "improved" water sources. At the latter sources, this involved either pumping the water (from the bore-hole and shallow well) into their jerry cans[30] or simply placing their water containers under the outlet pipe of the protected spring and waiting for them to fill-up. As for the "unimproved" water sources, it was a matter of dipping the jerry cans in the water, with their openings in first. Table 6.4.2 shows that the time taken to fill water containers depended on the water technology and size of the jerry cans, whose carriers

[30] Hard plastic containers originally designed as metallic in Germany in the 1930s. They are currently used for fetching water in most of Eastern Africa, and are of different sizes and capacities, but the common ones in Makondo were the 5L, 10L and 20L

differed by age and gender (see also Sub-section 6.6.1 ahead). As shown in Table 6.4.2, pumping water to fill a 20L jerry can required an average of 1.26 minutes at the bore-hole; 1.46 minutes at the shallow well, and 1.21 minutes at the protected spring. Filling a 10L jerry can at the pumps took a minute or slightly less and about half a minute at the protected spring.

Table 6.4.2. Summarised Illustration of Average Time Taken Drawing Water from Water Points in Makondo Parish

Water Technology	**Time Taken Drawing *(minutes)***			
	20 litre jerry can	10 litre jerry can	5 litre jerry can	3 litre jerry can
Protected Spring	1.21	0.55	0.40	0.33
Borehole	1.26	0.80	0.70	0.35
Shallow Well	1.45	1.00	0.80	0.37
Open Well	0.77	0.47	0.37	0.22
Open Ponds	0.79	0.53	0.38	0.21

Source*: Field findings, December 2011 – early February 2012*

On the other hand, filling a 20L jerry can at the open wells took only 0.77 minutes on average, and a 10L jerry can required half a minute or less at the open ponds and wells respectively. Therefore, it took shorter times for women and children to fill their water containers at the "unimproved" sources, as they did not require pumping and had no queues. And, because of the larger surface area at the open water sources, it was easy for many individuals to fill their jerry cans at one go. Even though it took young children slightly longer time periods to fill their jerry cans at the "unimproved" water points, collecting water from them was generally less time-consuming.

Some social factors, such as age of the individuals and their sex or gender could also have determined the time they took drawing water at the water points. For example, unlike the protected spring that was perhaps 'gender neutral' in terms of effort needed since it did not require pumping, observations at the shallow well and bore-hole showed that children and females took slightly longer periods pumping water to fill their jerry cans. Some women complained that pumping water required more energy, saying the pump's handle was sometimes too 'hard' and 'yielded less water'. Other women and an old man in his 60's complained that they would develop palpitations after pumping water at shallow wells or bore-holes, particularly when pregnant for the former. For example, female FGD participants from Makondo Village complained: "*When you are pregnant and you pump and carry water, you develop palpitations* [locally known as *entununsi*]". Even at the protected spring in Makondo village where

individuals did not have to expend energy, the low speed or flow of water from the outlet pipe due to reduced ground water recharge especially in the dry season meant that they had to take several minutes to fill their water containers. Most of the PO sessions on time taken queuing, pumping and drawing water were done in the second dry season[31], a period during which water scarcity was assumed to be milder. FGD participants and IDIs revealed that during the harsher first dry season (June-early August), the times taken drawing water were usually longer, and that filling a 20L jerry can alone would take 10-15 minutes, while queuing would take 6 hours or even a full day for children. However, during the rainy seasons, the time taken was even shorter. Queuing for example was not as severe as some households harvested rain water and therefore did not have to send their children to the water points. Also, the water flow from pumps and the protected spring was higher and faster during the rainy seasons due to relatively higher water tables, and so the time taken queuing and filling the water containers reduced considerably. For example, female FGD participants from Makondo Parish substantiated that during the rainy season, there were fewer queues at the protected spring and that women and children spent on average between 5-15 minutes queuing, and another half to two minutes drawing water depending on the sizes of their jerry cans.

There seem to be no specific studies on gender and time spent drawing or filling water into containers at water points in developing communities, yet these are key aspects of the free or unpaid labour for water collection provided by women and children in patriarchal settings; most studies combine this time with that taken to fetch water from water sources. Nonetheless, the findings on water containers used by the communities are analogous to what has been reported in East Africa (Thompson *et al.* 2001) and a rural district in Eastern Uganda, where young children aged 3-5 years also carried 3-5L jerry cans and some children aged 10-13 carried 20L jerry cans, just like the adults. The current study has shown that the more conventional sources of water, which have previously been hailed as capable of reducing the time women spend carrying water (e.g., Whittington et. al 1989:1; Arku 2010) require more time to draw water from them, compared to the open sources. This has implications on the effectiveness of rural water technologies in future with regard to the time burden. As noted earlier on, understanding the time burden of water collection requires examining factors other than the time spent moving to water

[31] that is December – early February 2012

sources and returning. Time is also spent through certain social processes that occur before one draws water, such as waiting or queuing, which is the centrepiece of the next section.

6.5 Congestion and Queues

The physical presence of individuals at water sources through 'conventions of queuing' determines access to water (Franks and Cleaver 2007:301), or water collection in this case. Lining up and waiting for water is also major cause of 'time poverty' for women and children in the developing world (Ray 2007:428-429).

Almost a third (26.7%) of the survey respondents in Makondo Parish acknowledged queues as a major problem they faced while obtaining water from "improved" water sources alone (or 16.8% for all main sources of drinking water combined, as shown in Table 5.2.1c in Chapter Five). Long queues were frequent because many of the pumps in the Parish had broken down and those that were functioning were shared, many times by households from two or three villages, such as the shallow well in Kayunga village and the bore-hole in Kanyogoga. This led to congestion and over-use of the pumps and the protected spring in Makondo village. Observations at these water points at different times of the day showed that queues were longest in the early mornings between 6 and 8 a.m. (before children went to school) and late evenings between 5 and 7 p.m., after the children had returned from school. Moreover, most of the PO sessions were conducted during the shorter first dry season as discussed earlier; during the long dry season (June-August), queuing was reported to be exceptionally worse, with children and women spending between 2 and 6 hours. This was again due to overuse of the water sources and 'geogenic' or natural factors discussed in the previous section.

Key Informants and some FGD participants confirmed that it was also during queuing times that physical and emotional exchanges and abuses among water collectors increased. Queuing at the "improved" water sources also led to fights and quarrels among the water fetchers. Long queues always prompted fights between children and youths over who would first collect water or even between children and adults due to impatience as some individuals simply wanted to jump the queue. In some cases, in a show of force over their younger counterparts, children and youths, especially boys (who often expressed their physical energy and masculine power), forcefully

jumped the queues, and this was a leading cause of the fights. For instance, at least four fights between children were observed during PO sessions. Two of these fights were at the bore-hole and both were caused by impatience due to queuing; in one of them, two children — a boy and girl — tussled with each other because the former wanted to overtake the latter in the queue, something the girl could not allow to happen. The other two fights were at the protected spring, and whereas one of them was caused by forceful jumping of the queue, the other seemed to have stemmed from the playful behaviour of the two boys involved as one slapped his counterpart from behind, unprovoked. Some male and female FGD participants also revealed that their children sometimes returned from the protected spring and pumps with minor cuts or swellings on their hands or various parts of their faces and heads, many of which were due to fighting. This is discussed in more detail in Section 6.7.

Whereas studies on queuing at water sources in developing communities are few, this study's findings on congestion and queues at "improved" water sources in late evenings and during long dry seasons have been reported in some parts of Uganda (e.g., Ademun 2009; GOU 2011a; Rudaheranwa *et al.* 2003). Also, the occurrence of queues in Makondo Parish due to few "improved" water sources serving a big population is consistent with what has been established in rural Kazakhstan (O'Hara, Hannan, and Genina 2008) and rural Ghana (Arku 2010:240), where women (and children) lined up for water at "improved" water points for periods of up to 30 minutes, far less than the time in Makondo during droughts. The next sub-section explores water carrying or transportation and its likely health problems in detail.

6.6 Transportation of Water and Associated Health Risks

The transportation of water from a water source to households as points of use requires labour or physical effort as it involves carrying (Franks and Cleaver 2007; Sorenson *et al.* 2011:1523). Carrying water has gendered health effects, especially the 'calorific expenditure' required as per the method or technology used and how long one is involved in its transportation (Geere *et al.* 2010; Sorenson *et al.* 2011:1525). Following from Foucault (1977), the use of technology to transport water involves power relations in which individuals may acquiesce or police themselves.

The subsequent sub-sections examine the technologies used to transport water and the self-reported health effects.

6.6.1 Water Carrying

In Makondo Parish, hand lifting (or head loading) was the most common method of transporting water (Figure 6.6.1). Over 90 percent of the women and female children carried water by hand lifting or head loading, compared to 37.6 percent for men.

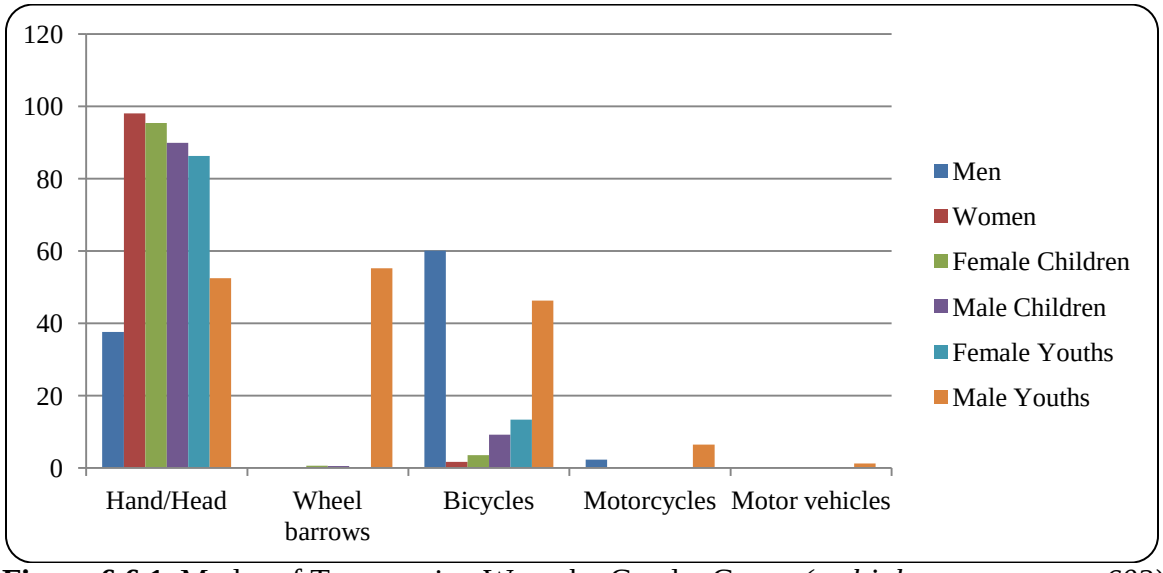

Figure 6.6.1. Modes of Transporting Water by Gender Group *(multiple responses, n=602)*

Observations at the water points also showed that men and male youths mostly used bicycles to fetch water, and sometimes motorcycles and wheel barrows. For example, three men, two at the shallow well in Misaana village and one at the protected spring in Makondo were sighted using motorcycles to fetch water. Only a few girls and women were seen collecting water using bicycles. Two of the girls, both aged 14 were seen in the villages of Kibuye and Misaana; another girl aged 17 was from Kyakanyomozi, a village near Kibuye; while a woman aged 26 was from Misaana. Women's limited access to bicycles was mainly due to the patriarchal culture, which promotes men and male children's use of bicycles (and other valuable household technologies). Traditionally, bicycles are important household assets that are owned by men and predominantly used by men, male children and youths. This order is maintained by the men, women and girls themselves, as is the case in many rural communities in Uganda.

Over 70 percent of the survey responses highlighted the tiresome nature of carrying water as a constraint, with many respondents adding that carrying water required 'a lot of physical energy'. Indeed, carrying water, whether by hand or even using tools and other related technologies creates physical demands on the body (Geere *et al.* 2010:2). From their own experiences, men, male youths and children found it relatively less physically arduous when they used bicycles to fetch water. A 15-year-old boy found collecting water from an open pond in Misaana village had this to say: "*When I have my bicycle, fetching water is not a big problem.....but when I carry water on my head, I don't feel comfortable. I get headache, chest and neck pains*". On the other hand, women, female and male children and female youths who collected water by hand or head loading complained about similar and even more forms of discomfort due to the water containers they carried, as discussed in Sub-section 6.6.2.

The survey respondents also mentioned other constraints they faced in transporting water to their households, such as the 'time-consuming nature of carrying and transporting water' (41.0%); the bad roads and terrain from the usually valley-placed water sources (32.0%); and the rather small size of the containers that do not allow them to carry enough water to meet their domestic needs (31.0%). Surprisingly, the exasperating nature of transporting water for example was not significantly related to the gender of the respondents, $\chi 2$ (1, N=602) = 0.05, p=0.82; household type, $\chi 2$ (4, N=602) = 3.04, p=0.55; nor the location of all the households, $\chi 2$ (2, N=602) = 4.14, p=0.12.

These results testify that the onerous task of carrying water is performed by both women and male and female children and youths. In most developing countries, the major water carriers are women, with children coming second (e.g., White *et al.* 1972; Crow 2001; Ray 2007; Sorenson *et al.* 2011:1523). Previous research has also shown that due to patriarchal norms, and indeed policing and self-policing as argued by Foucault, rural women and children mainly carry water by hand or head loading (Ivens 2008; Lloyd *et al.* 2010), and that water fetching technologies or resources such as bicycles are mainly used by men and boys (e.g., Sugita 2006:531-532; Banda *et al.* 2007; Hazell 2010). Also, it is men and boys who use donkey carts in Southern Africa (Mazvimavi and Mmopelwa 2006:718). Also, transporting or carrying water from water sources

was burdensome for women and children regardless of whether their location was near trading centres or off the main roads in the villages. We now move on to how this burden impacted on the health of the water carriers.

6.6.2 Health-related Effects of Transporting/Carrying Water

In most literature, health is understood in terms of the social benefits of 'safe' water and reduction in water-related diseases (e.g., Crow and Sultana 2002:78; Esrey *et al.* 1988; WHO and UNICEF 2012). However, the health effects or risks of 'carrying water containers' (Geere *et al.* 2010:1-2) are also important, particularly for children and women who undertake this task on a daily basis.

Therefore, to further examine the strenuous and risky nature of carrying water, I looked at the size and capacity of water containers that individuals in Makondo Parish carried, and the resultant health-related problems. Most of the women, youths and children aged 15 and above carried 20L[32] jerry cans; female and male children aged 10-15 carried 10L; children aged 5-10 5L jerry cans; while 3L jerry cans were carried by children aged below 5. However, observations at the water points revealed that some children aged 10-15 years carried 20L jerry cans, a weight that could be agonising for their age, as revealed by many women during the observations and in FGDs.

Regarding the health problems they experienced as a result of fetching water, most of the survey respondents mentioned chest pain, although the pain was reported more frequently by women and female youths (Table 6.6.2). Chest pain was followed by fatigue and headache among male and female children and youths, ailments which could be due to the longer hours these individuals took fetching water daily, as well as the many trips they made to the water sources, as discussed earlier in Section 6.4. Nasal bleeding also occurred, and was highest among male children and female youths.

[32] Equivalent to 20 kilograms or 44 lbs considering that 1 litre=1kg or 2.2lbs (Taylor 1995)

Table 6.6.2. Perceived Ailments/Health Problems Resulting from Transporting Water by Gender Group *(multiple responses, n=602)*

Gender Group	Ailment (%)							
	Chest pain	Headache	Nasal bleeding	Fatigue	Back pain	Spinal problems	Others	None
Adult Males*	35.7	5.7	-	22.9	1.4	0.7	0.7	32.9
Adult Females**	64.4	6.7	0.8	13.6	1.9	0.3	1.1	11.1
Female Children***	34.5	23.1	2.7	23.1	-	-		16.5
Male Children****	33.3	19.7	4.0	23.7	-	-	0.3	19.0
Female Youths*****	42.6	19.1	3.5	19.1	-	-	-	15.7
Male Youths******	36.2	16.5	0.8	18.1	0.8	0.8	-	26.8

Source*: Field findings, July – November 2011*; *n=140; **n=360; ***n=255;****n=300;*****n=115;******n=127;*******n=18. Others includes least reported ailments such as "pain in arms" and "pain in legs"

It is important to note here that fewer ailments related to fetching water were reported by adult males, male youths and male children in that order, an issue that perhaps requires further investigations on whether for example this was due to these groups' use of bicycles or other factors, as indicated in Chapter Eight.

Deaths and accidental injuries due to drawing water, especially from "unimproved" water sources were also reported. Open water sources were said to be risky for children. For example, there were three cases of child drowning at open wells/ponds, and these were reported in the villages of Makondo (at Kanyankole pond); Wajjinja (at Gakyomya open well) and Kiganjo (Kidabada pond). One of these cases (Kiganjo) happened in October 2011, when I was still collecting data for this study, and it was reported that the two year old toddler who drowned was following his mother, thinking the mother had gone to the open pond. The toddler did not find his mother there, which confused him and he slipped and fell in the pond. The victim in Wajjinja village, a girl, was trying to retrieve a 5L jerry can that had slipped out of her hands into the middle of the open pond while she was filling it up. Sadly, she slid and fell in the middle of the pond and drowned. Cases of accidental injuries sustained while fetching water were also reported. For example, many of the child PO participants complained that they skidded on slippery roads during the rainy seasons, and often tripped over stones and other objects as they carried water along the uneven paths and roads to their households, as discussed in sub-section 5.2.1 in Chapter Five. As for the adults, a man who was trying to draw water from the open well

in Misaana village using a 20L jerry can slid and fell on the poles, sustaining severe back injuries that kept him hospitalised for a long period.

The findings of this study on the health effects of carrying water, such as tiredness and fatigue are in agreement with what Buor (2004) and Geere *et al.* (2010) observed in Ghana and South Africa respectively, where women and children also experienced fatigue due to carrying heavy water containers. Geere *et al.* also report that incline and slippery roads and paths, which relate to environmental conditions mentioned by women in Makondo Parish increases the 'physical work' required to ferry water (2010:8). Chest pain was most common among women and female youths in our study area, but it cannot be ascertained whether this was an indicator of their higher susceptibility to musculoskeletal strain as a result of carrying heavy water containers. And, whereas very few cases of back and spinal pain among women and children were reported in this study, Geere *et al.* (2010:7) found out that these ailments were common especially among women, and related it to head loading or the weight of the containers that women carried, many of which had capacities of 20-25 L, just like in Makondo Parish. In this study, these jerry cans were also carried by children aged 10-15, which may be even more detrimental to their health. Nose bleeds especially among children and youths in Makondo have not been described in most studies. I now turn to risks of physical, emotional and psychological assault or threats of assault as faced by water fetchers. Both women and children can find themselves vulnerable to verbal and physical assault as gendered social interaction unfolds around water accessing processes.

6.7 Risks of Assault on Women and Children

Attacks on women and children are some of the less understood social problems that characterise the water collection process. These attacks can be verbal or physical, and the latter can come from both humans and wild animals (Sorenson *et al.* 2011:1525).

6.7.1 Verbal Attacks

Verbal attacks, or offensive insults or words directed at an individual reportedly occurred at water points in Makondo Parish. Children, women and adults interacted or 'socialised' while at the "improved" and "unimproved" water points. Children interacted more among themselves

through chatting and playing, as discussed in Section 6.5. Whereas the interactions among adults and between adults and children were generally affable, some survey respondents and male and female FGD participants affirmed that children sometimes used or exchanged socially and culturally unappealing language and vulgar words which adults felt uncomfortable with. Many of the child PO participants, especially girls admitted that boys insulted them while queuing or drawing water from the water points. One of them, a girl of 9 years found at the shallow well in Misaana village expressed her displeasure about some boys that insulted her whenever she found them at the shallow well. A few verbal attacks were reported between adults and children. For example, as I was carrying out my field work in December, I heard that the Caretaker (a man) of the Misaana shallow well was verbally attacked by a young girl of about 10 years when he tried to caution her about misusing the pump. The girl was later punished and her parents fined by the WUC that I and another WIL researcher had revived through one of our community meetings in the village.

6.7.2 Physical Attacks by Humans and Animals

Attacks from Humans

As indicated in the previous sub-section, children interacted and played together while at water points. But these interactions, especially at "improved" water points sometimes degenerated into verbal exchanges, quarrels or physically injurious fights. Child fights and injuries at the "improved" water sources were reported in the FGDs, for example:

> *Our children fight a lot at the protected spring, and many times they do not tell us. Sometimes they fight with each other and get seriously hurt. A child may sustain a swollen ear or cheek and keep quiet. It is only when he/she gets worse after a day or two that he/she tells us that she is sick. When you ask him/her what happened he/she says so and so beat me when we were at the protected spring.*
>
> (Men's FGD, Makondo Village)

Physical fights involving adults at the water points were uncommon, although some were also said to have sometimes jumped the queue when they found children at the pumps or the protected spring.

There were also reports of rape, attempted rape and threats of rape perpetrated against children and women (which relates to the problem of water collection being risky for children, especially girls outlined in Sub-section 5.2.1 in Chapter Five). A child was said to have been raped near an "improved" water point in Kijjajasi village, and this caused trepidation among children (and women) who often used this water point. There were also two other cases of child rape reported in Makondo and Micunda villages. One of the PO participants, a woman from Makondo village also said that around 2008, a man suffering from drug addiction attempted to rape women and girl children who went to an "unimproved" water source in the late afternoons. It was alleged that earlier, in 2005, a child who had gone to collect water at the same well was raped. Survey respondents also confirmed that another child was attacked at an open pond in Micunda village.

Animal Attacks

Animal attacks related to collecting water in Makondo Parish were rare, but the risks existed for some "unimproved" sources. For example, survey respondents and PO participants expressed fears over frequent sightings of 'big' snakes[33] at one of the open wells in Makondo village. Some women and children further said that they heard 'sounds of foxes' (foxes are locally known as *ebibe*) coming from the well at night and that mysterious 'white lights' were usually seen at the well beyond 7pm. The fear of being attacked by these animals and spirits associated with the mysterious lights forced most women and children to collect water from the well only between 8am and 6pm.

Some organisms in open water sources also caused concern. For instance, the children found at the open pond in Kibuye village and the Kanyankole open well during PO sessions said that they were sometimes bitten by leeches as they lowered their jerry cans into the water. From the children's descriptions and what I saw, these looked like blood-sucking leeches which need to be investigated further to know their species and whether they transmit any diseases. The study participants also mentioned that they suffered mosquito bites while at the water sources, especially in the early morning before 7am and in the evenings after 6pm. One of the commonest

[33] These were said to have coiled around the edges of the well in the afternoons and in the evenings, especially around 12 noon and between 3-4pm in the dry seasons, and at 7pm or after during the rainy seasons.

diseases reported at the MMM's health centre in the Parish was malaria, which was more prevalent among children aged 5-15 years, although all ages were susceptible (WIL Project Records, January – December 2011).

Previous studies on verbal, physical and animal attacks while moving to water sources or collecting water are hard to come by. But this study's findings on verbal abuse of especially female children at "improved" water points are similar to earlier observations in Asia, where women were also abused while fetching water from private wells (Shah 2002). In addition, this study's findings on child rape at "unimproved'' water sources are consistent with those of Kircher (2007), who also found out that women in particular were raped while fetching water in the fragile region of Eastern Congo. It is interesting to note that, as observed in this study, children are vulnerable to both verbal and physical attacks while queuing at "improved" water sources. And, whereas this research has shown that there were risks of men, women and children being attacked by animals such as snakes and foxes at "unimproved" water sources, another study in rural North-western Botswana revealed that children who fetched water from a river, an open source, were exposed to crocodiles (Kgomotso and Swatuk 2006:664).

Hence, water collection exposes women and children in Makondo Parish to verbal and physical assault. Children are verbally abused while at water points and they also pick up fights due to the long queues at "improved" water points. Water collection further exposes women and children to risks of being physically attacked or raped especially at open water sources. As the main water fetchers, women and children also risk being attacked by animals and various organisms in open water sources. Contamination of water sources was another social and health-related concern, and it is discussed in the next section.

6.8 Contamination

Contamination of water sources is a social and health issue that affects the various groups that collect water in poor communities (Sorenson *et al.* 2011). Whereas the contamination of water may generally be due to elements such as toxic chemicals and minerals (Giddens 2006:946; Miller and Spoolman 2011), it can also occur in the form of human or animal traffic around

water sources (Sorenson *et al.* 2011; Steinfeld *et al.* 2006), which makes access untenable for women, men and children.

Contamination by both humans and animals occurred in Makondo Parish, and accounted for about 19 percent of the survey responses for the major problems that men, women and children experienced in collecting water from their major sources, as illustrated in Table 5.2.1c, Chapter Five. It was mostly reported around or in open water sources, with pastoralists or cattle-keeping groups (discussed in Chapter Five, Section 4.4) and children as the major culprits.

6.8.1 Contamination by Cattle-keepers

The pastoralists shared open wells and ponds with the more predominant crop and mixed farming communities, and the former easily accessed the open water sources so as to water their animals, especially in the villages of Micunda, Kiteredde, Kayunga and Makondo. However, many female survey participants and crop farming men complained that cattle keepers, mainly the herding men and young boys were at fault for letting cattle contaminate the water with mud, urine and dung as they often left their animals to drink directly from the communal ponds, open wells and wetlands. The cattle also destroyed the grass and other vegetation around the water points. Cattle can increase bacteria and parasites in water, making it unfit for human consumption or any other productive uses (Descheemaeker, Amede and Haileslassie 2009:9; Steinfeld *et al.* 2006:273). As a sign of their awareness of the dangers of contamination of their water sources by cattle, some women questioned why the cattle keepers did not restrain their animals or water them using troughs while at the water sources so as to prevent the animals from drinking directly from the ponds/open wells. As a result, in order to obtain 'less contaminated' or 'cleaner' water, some women and children waited for several minutes for the water to settle, or returned to the ponds at a later time of the day when the cattle keepers had left the ponds/open wells. This in a way also increased the 'time burden' of water collection for women and children. But sometimes timing the cattle keepers was difficult, and some women and children often ended up visiting the water points at the same time as the pastoralists.

6.8.2 Contamination by Humans

Children contaminated the open wells and ponds most, by directly stepping into the water when filling their jerry cans, or through throwing foreign objects or substances in the water. During observations at the pond in Kibuye village, two children were seen stepping in the water, one with a deep wound on his leg, and another girl who had jiggers. Children also threw substances such as rubbish, gravel, stones and sticks into the water sources. Some children also enjoyed playing in the water in the open ponds. Children, especially those aged five and below contributed to the unsanitary conditions around the water points. Some 2-3 year olds that often accompanied their older siblings to the water points (often with smaller jerry cans of 3-5L) defecated around the pumps and open water sources, and their faeces were easily washed into the ponds by run-off, together with debris from uphill households, some of which had no sanitary facilities as indicated in Chapter Four, Section 4.10. Whereas observations did not capture any children defecating, human faecal material was seen on two occasions along two separate paths - near the open well in Makondo village and shallow well in Misaana village. Some women living in the trading centres in these same villages said that the sight of faeces at these water points was unpleasant. They added that they were then forced not to fetch water, send their children to collect the water, or buy water from vendors.

As already discussed, run-off was another form of contamination of water sources in Makondo Parish. Run-off was common during the rainy seasons, and carried many substances, including soil, animal dung and faecal material into the water in the low-lying open water sources. This was the main reason why communal de-silting was done at specific periods of the year for some open water sources (and the protected spring) in villages such as Misaana and Makondo so as to prepare the water points for the dry seasons. There was also the washing of jerry cans, bicycles and sometimes motor cycles at the water points. Jerry cans were mainly washed by children and women, while bicycles and motorcycles were washed by their main users and owners in the households - boys and a few men. Many times bicycles and motorcycles were washed using detergents such as soap, which contaminated the open ponds and the gutters around the pumps and the protected spring. Washing of jerry cans was observed at almost all the water points during the PO sessions, but bicycles and motor cycles were mostly detected at “improved” water points such as the protected spring and the bore-hole in Kibuye village.

Thus, contamination of open water sources is a serious issue because most of the households in the Parish rely on them more than on the "improved" water sources, as noted in Chapter Five, Sub-section 5.2.1. It pauses a huge health risk to the lives of the rural men, women, boys and girls in the area as it causes water-borne diseases such as diarrhoea, which may in turn increase household expenditure and poverty. In fact, 12.3 percent of the survey respondents confirmed that female children in their households had suffered from diarrhoea within the period of one year before they were interviewed, and another 11.1 percent said that male children had suffered from the same disease.

The contamination of open water sources in Makondo Parish is comparable with discoveries made in other parts of rural Africa, such as Ethiopia (Ebato and van Koppen 2005), where, on a positive note, communities considered water from open sources such as rivers as unsuitable for drinking even after filtration because livestock drank water directly from them and women washed their clothes from there. Women's washing of clothes from "unimproved" water sources was rarely reported in Makondo; instead, it was the washing of jerry cans, bicycles, and motorcycles. Children's throwing of materials in the water and defecating around water sources, both open/traditional and "improved" also caused concern and influenced access to some water points in the study area.

6.9 Conclusion

This Chapter has illustrated that water collection, as noted by theorists such as Roy and Ben (2004), Coles and Wallace (2005) and Walby (1990) is socially constructed and gendered through a patriarchal order, and that it occurs under a disciplinary regime. We have seen that 'free labour' for water as described by Franks and Cleaver (2007) is provided by women and children, and that the real burden of collecting water in the rural developing world falls on these groups. Women and children further experience numerous difficulties in collecting water from both "improved" and "unimproved" water sources, which complicate the benefits they derive from water. I have also demonstrated through this case study that understanding the gender dimensions of water collection requires moving beyond the development model that focuses on water technology, overall time and linear distance travelled by women, men and children. The

process of collecting water itself; the diversity of water sources used; time spent queuing, drawing and transporting water; modes of transporting water and nature and weight of containers used; health complications related to carrying water; and trips made daily to the water sources are key factors in understanding the social troubles that children and women as the less privileged groups undergo when collecting water. These factors are crucial in determining gender roles and responsibilities, the actual drudgery of water collection and overall access to water at household and village levels in rural developing communities.

Distance to water sources is a big problem for women and children; but the time they spend lining up at pumps and the protected spring, especially in the early morning and late evenings when these water sources are congested is more distressing. This perhaps highlights the fact that Franks and Cleaver's 'conventions of queuing' are highly gendered especially at "improved" water sources. Also, drawing water from the same sources is time consuming, especially in the dry seasons, while the heavy containers carried by hand or on the head (and the associated calorific expenditure according to Geere *et al.* 2010) endanger the health of women and children. Women and children are also more susceptible to diseases resulting from contamination by animals and run-off (Descheemaeker *et al.* 2009; Esrey 1988). Also, it is because of queues at pumps and the protected spring that children engage in uncongenial fights, verbal abuse and youths and some adults also lose their property, such as bicycle covers for their jerry cans, and bicycle parts like straps and valves. The risks of verbal and physical attacks from humans and animals, many of which were uniquely revealed in the survey and participant observation sessions are also real, and are higher for children and women.

The disciplining nature of water collection has also been demonstrated by men and women's responsibilities and access to bicycles as water fetching technologies. We have seen that due to historical cultural practices, women (assisted by children) accept the heavy responsibility of providing water in their households, and that their access to bicycles is curbed, all of which resonate with docility and self-policing as argued by Foucault. In addition, women's sending of children to collect water and their own refusal to collect water in rare cases are counter-hegemonic acts of resistance. In short, water collection in Makondo Parish is gendered, and women's and men's docility or consciousness creates a normalising gaze in which children and

women shoulder the entire responsibility of undertaking this burdensome task. The next Chapter explores participation in water governance in Makondo Parish.

Chapter Seven: Disciplining Women's Participation in Water Resource Management

7.1 Introduction

In Chapters Five and Six, we have examined the various ways through which women, men and children access water, with the latter chapter focussing on the process of water collection. We have noted that there are a number of social mechanisms and processes that influence women and children's access to water, and that these combine with patriarchal norms to increase the burden and drudgery that these groups face in collecting water. In this Chapter, I will explore the various ways through which men and women participate in the governance of water resources at a local level, principally their representation and transformative participation in local water spaces. As noted by Franks and Cleaver, participation in water governance is 'gender-specific' (2007:297), and this in a way determines how the various actors or agents are involved. Drawing on Foucault, Lefebvre and Cornwall, I begin by briefly analysing the main water actors in Makondo Parish (many of whom are also stipulated in Uganda's rural water policies discussed in Chapter Three), their roles and power with a gender lens. Based on the ideas of inclusive democracy advanced by theorists such as Chantal Mouffe and Iris Marion Young, particularly the involvement of marginalised groups in 'all political processes' of decision-making, I then assess the transformative potential of local water spaces in Makondo Parish. I examine representation, an under-researched area in development and water governance in particular, analysing the involvement of men and women in all the processes of safe water provision and management in Makondo Parish. I start with pre-construction and choice of water technologies, exploring men and women's involvement in any related spaces and their preferred technologies, the siting of the technologies, and the influence of gendered or patriarchal cultural norms and practices. I go on to analyse the gender dynamics in the real establishment of the water points, showing the gendered power relations in which decisions made at the pre-construction phase may be over-turned to the detriment of women. I then look at membership in local water institutions, described by theorists such as Cleaver (2004), Singh (2008) and Cleaver and

Hamada (2010) as a key aspect of representation of the marginalised, focussing on the village-based WUCs and key 'actor' positions at the Sub County and District levels. I also assess what Agarwal (1997) and Cornwall (2008) call the 'physical presence' of men and women in water meetings, who invites individuals for meetings, who turns up, who sets the agenda, and whose voices are heard and influence over final decisions made and their implementation. In all these processes, I highlight the role of patriarchal cultural norms, gender-based stereotypes and practices and how they tend to disadvantage women and give men more power and privileges in local water spaces. Foremost, I analyse the main water actors in Makondo Parish.

7.2 Major Actors in Safe Water Delivery

In Chapter Three, Section 3.3, we saw that, corresponding to Foucault's ideas, power is 'everywhere', exercised through a net or web. According to Foucault, individual actors who are 'simultaneously undergoing and exercising this power' should be taken seriously as they influence discourses that are created and operationalized in a given context (Foucault, 1980:98). Others have held that power is held by many social groups or actors in this case, who struggle among themselves in social, cultural or gender relations at various levels (Dahl 1961; Lukes 1974). Thus, understanding the actors and who they are is key in examining any participatory process (Gaventa 2004b; Gaynor 2010). Following Henri Lefebvre's conception of space also considered in Chapter Three, actors relate and assert their power and control through institutions, which then determine their roles, levels of engagement and power in public and local arenas (Gaventa 2004a). Further, this resonates with Andrea Cornwall's suggestion based on Foucault and the recognition of difference, that the interplay of power between actors determines who is included or excluded in development and whose knowledge is acknowledged.

Thus, a starting point in the analysis of gender and participatory water governance in Makondo Parish would be to understand the main water actors and their institutions, their roles and power, and, in this case how these are gendered, as elucidated below. Three key types of actors or 'water service provider groups' (van Koppen *et al.* 2009:28) were identified in Makondo Parish, following the geo-political institutional set-up at Village, Sub County and District level, which is also stipulated in NFOMRWS that follows the community-based system. These included civil-society actors, government actors and water users (Table 7.2). As partly examined in Chapter

Five, the main civil-society actors were NGOs, particularly the MMM, who stood out compared to other actors. The majority of the survey respondents (57.1% females and 59% males) recognized the MMM's as the most important safe water service provider in their midst. The MMM's funded the construction of most of the shallow wells in Makondo Parish, and their role in repairing shallow wells (and some bore-holes) was appreciated by 62.6 percent of the respondents. Other CSOs that were said to have been active in the past were World Vision and UNICEF, which constructed the only protected spring in the Parish.

As shown in Table 7.2, the main government or local government actors included: WUCs and Village Chairperson at village level; the HPM and Health Assistant at the Sub County; and DWO at District level. The important role played by the Sub County HPM was discussed in

Table 7.2. Major Actors in Water Service Delivery in Makondo Parish and their Selected Roles

No.	Category	Actor	Role/Contribution in Water Supply/Delivery
1.	Civil Society Organisation/Non-governmental Organisation (NGO)*	MMM (partly funded by Irish government and Trócaire)	• Construction of shallow wells (started in 1996)[34] • Repair/rehabilitation of shallow wells and few bore-holes • Sensitisation/Training on Health (sanitation and hygiene) and O&M (WUCs and water users)
		Kitovu Mobile	• Sensitisation/Training on WATSAN, water treatment and O&M of pumps
		World Vision	• Constructed a few bore-holes
		UNICEF	• Constructed protected spring
2.	Government/Local Government*	Village Chairperson*	• Oversee operations of WUC • Mobilise community for O&M
		WUC*	• Planning and overseeing O&M • Reporting problems with water source • Engaging HPM for repairs
		Sub County HPM*	• Maintaining and repairing water sources together with Caretakers/WUCs

[34] NGO Key Informant, *person. commn.*

		Sub County Health Assistant (SHA)*	• Selecting, supervising and working with HPM • Health education • Training and supporting WUCs • Inspecting proposed water source sites • Inspecting the hygiene of water sources
		District Water Officer (DWO)*	• Planning equitable distribution of water in District • Financial and technical advice, back-up, and support to Sub Counties • Sensitising local leaders and communities • Training of staff and WUCs
3	Citizens	Water Users/Water User Groups* (men, women and children)	• Participate in all water-related planning and decision-making, including site selection, meetings • Electing WUC members, each with particular roles

Source*: Field findings, March—December 2011 and January—February 2012; *Also generally or specifically stipulated in the Water Statute and NFOMRWS (GOU 1995, 2011a).*

Chapter Five, where his relationship with the local water users and Village Chairpersons among others determined the functionality of pumps in Makondo Parish and women and children's ability to obtain safe water for their households. The HPM also had the potential to influence the participation of men and women in the management of their water sources, again through his relationships with Village Chairpersons and WUCs. Whereas the Water Statute and NFOMRWS state that the responsibility of, for example, supporting and training WUCs and water users lies with both the Sub County Health Assistant and the Community Development Officer, Ndagwe Sub County assigned all these roles to the former. The Sub County Health Assistant himself acknowledged that he was supposed to work with the DWO, CDO and NGOs in the execution of his duties but did not have adequate resources to do so. Another 15.6 percent of the survey respondents said that the Sub County and District Local Governments government had established water sources in their community, many of which were bore-holes. Indeed, FGDs and most Key Informants confirmed that most of the bore-holes in the Parish, such as those in the Villages of Kyamukama, Kanyogoga, Kibuye, Makondo, Misaana and Kijjajasi were

constructed by the government. However, there were complaints that unlike what most CSOs do, government does not follow-up on community management of most of the bore-holes after construction, and that it rarely supervised and monitored them for gender equity and other governance concerns discussed in the next sections.

The water users were the WUGs for each water source, who comprised of men, women, boys and girls with varying socio-cultural backgrounds, as described in Chapter Five (Section 4.4). Water users, or what are sometimes described as 'beneficiary communities' in rural water policies are *inter-alia*, required to participate in 'all aspects' of community-based management (broadly classified as preconstruction and selection of an "improved" water source; construction of the water source; and post-construction, or operation, repair and maintenance as explored in Section 7.3), with equal representation or involvement of women and men. The survey respondents admitted that they participated in various aspects of safe water delivery, but there were gender differences (Figure 7.2).

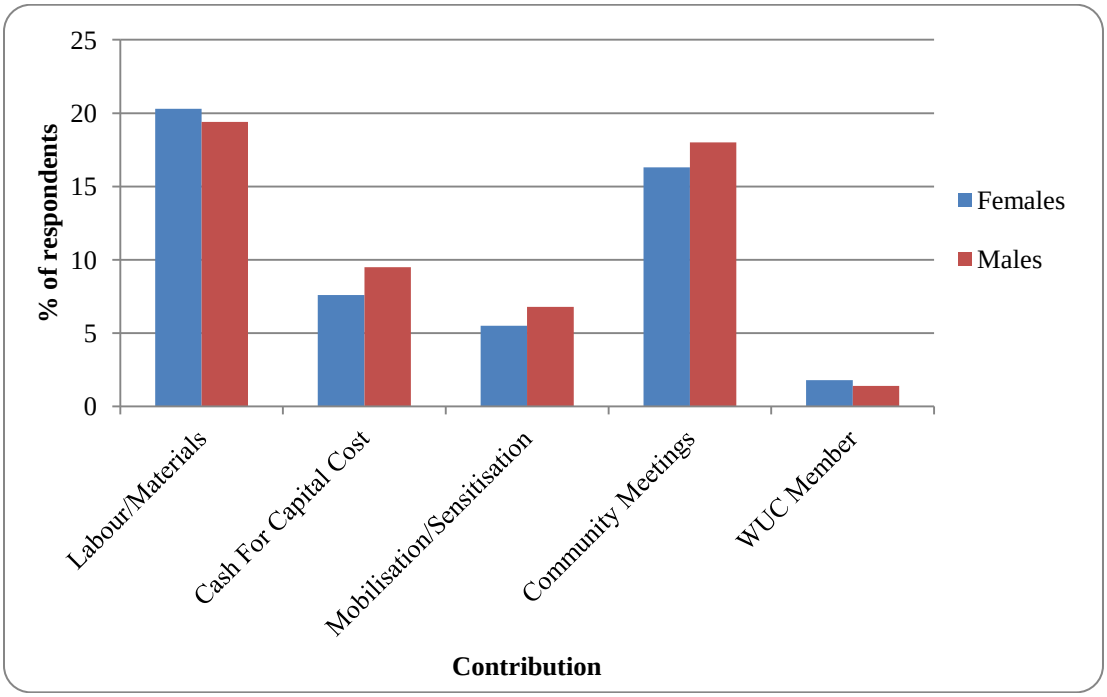

Figure 7.2. Selected Contributions Towards Safe Water Service Delivery by Gender *(multiple responses, n=602)*

As shown in Figure 7.2, slightly more female than male respondents admitted that they had contributed labour and or materials during the construction of "improved" water sources, while

more males participated in community mobilisation and sensitisation activities. As the traditional household providers, men also made more cash contributions towards the initial cost of constructing some of the safe water technologies in their villages. Men's higher participation in community mobilisation and sensitisation activities could explain why women were less involved in organising or convening WUC meetings in Makondo Parish, an issue that is handled in more detail in Section 7.4. Furthermore, whereas Figure 7.2 shows that men attended community meetings more than women, the reality was that women were more physically present in the meetings, as discussed in Sections 7.3-7.6. These were analysed basing on the four case study villages and their safe water technologies in Makondo Parish: the functioning protected spring in Makondo Village; the functioning shallow well in Misaana; the malfunctioning bore-hole in Kanyogoga and malfunctioning shallow well in Kibuye.

Most of the positions held by the water actors were gendered. With the exception of the MMM, the major actors in water delivery in Makondo Parish were men, or were led by men. For example, the DWO and SHA were men; all the Village Chairpersons and HPMs were men; and the WUCs were led and dominated by men, contrary to rural water policy provisions as expounded in Sections 7.3-7.5 ahead. For example, despite the fact that the identification of HPMs, including those trained during preconstruction and construction phases of water points should be gender sensitive, the position was locally maintained and stereotyped as a 'man's job'. A Key Informant commented on the absence of female HPMs in the Parish, Sub County and District:

> *Culturally, hand pump mechanics are known to be men. If a woman becomes a pump mechanic, people will say she is kikulasaja* [she is a 'man-like' woman]. *Others say 'how do they see a woman repairing a pump? It looks awkward'.*
>
> (Male District Key Informant)

The above results seem to be consistent with those of other studies done in developing communities in Africa, where key actors in water delivery and governance in NGOs and local governments respectively are men. Unsurprisingly therefore, the government actors such as SHA and DWO took gender issues in the governance of water resources in Makondo Parish as more of an addition. Despite their mandate as stipulated in the NFOMRWS, these two actors

expressed some degree of insensitivity to the gender issues in water management and did little to emphasize the active involvement of women in water management or even support and train water users and WUCs. The failure by government actors to perform such important 'software' activities has been reported in some rural parts of Uganda (e.g., Kanyesigye *et al.* 2004; Asingwire 2011). The explanations here include inadequate finances and inadequate training of the actors themselves with limited emphasis on gender. Furthermore, the conduct of government actors seems to be consistent with Peter Gleick's observation that water managers focus on 'building structures to capture and deliver water and water services' and that they do not appreciate the importance of dialoguing with water users (2003:302), or in this case women and men. Whereas Gleick blames this state of affairs on the professional skills and training that these individuals undergo, this study has been unable to clearly demonstrate it in Makondo Parish, where it was evident that the government actors did not have adequate gender skills. For example, the District Key Informant complained that the District Water Office 'lacked staff with social and gender skills' so as to adequately implement 'software' activities; while the Hand Pump Mechanic thought that women could not give him a hand in the repair or construction of hand pumps. In addition, with the exception of the MMM's who were largely women (perhaps because the organisation was founded and is run by Irish Catholic nuns) most of the other key water actors in Makondo Parish were men. Looking at the HPMs for example, there was no female serving in Makondo Parish, or Ndagwe Sub County for that matter and the entire Lwengo District. The two female HPMs were said to be in other districts, one in Rakai, South of Lwengo and another one in Lira in Northern Uganda (NGO Key Informant, *pers. commn.*). In Uganda, both female and male community members have previously been trained to make minor pump repairs in rural and peri-urban communities, but the numbers for the former were fewer by far (e.g., Kanyesigye *et al.* 2004:16). There are also few female HPMs, as, for instance, women constituted only 16 percent of JICA's HPM trainees in Kiboga District (GOU 2011a), while another recent study that covered 16 districts in the country revealed that about 97 percent of "improved" water source technicians (such as HPMs[35]) were males (Asingwire 2011:26).

In contrast to earlier findings in some rural parts of Uganda (e.g., Mommen and Nekesa 2010; Asingwire 2011; Nimanya *et al.* 2011), there seemed to be no lack of HPMs in Makondo Parish.

[35] Others were plumbers and GFSAs or masons who construct rain water tanks for example.

The Sub County and NGOs, particularly MMM had these individuals within reach. Also, the patriarchal stereotypes and 'labelling' of would-be female HPMs in Makondo Parish (and perhaps Ndagwe Sub County) differs from earlier research that cited constraints faced by serving female HPMs, such as restriction of their movement by their husbands or partners to avoid being 'in the company of men and in isolated areas', and lack of 'enormous energy' to carry heavy tool kits or perform repair or maintenance tasks (GOU 2011a:18).

As we are going to see in the subsequent sections, the practices of the actors, particularly government and CSOs determined how men and women participated in water governance processes. We shall now examine the representation of men and women in all aspects of local water governance.

7.3 Representation in Local Water Management

7.3.1 Pre-construction and Choice of Water Technologies

In line with Chantal Mouffe and Iris Marion Young's theorisations on power and inclusive democracy outlined in Chapter Three, more inclusive representation ought to include marginalised groups in all political processes of discussion and decision-making. Here, Cleaver (1999) suggests an understanding of 'local norms' of decision-making, and how they give communities and marginalised groups what Harold Lockwood calls 'a sense of ownership of the infrastructure'. Rydghagen (2002) and Panda (2007) note that involving women in making decisions and choices on water resources ensures more gender-transformative, effective and sustainable water governance. More specifically, Uganda's NWP and NFOMRWS further stipulate that all water actors should ensure that water users participate in discussions involving the choice of water technologies, siting and construction, taking into consideration 'women's involvement'.

Asked to assess the way safe water service delivery programmes involve them in deciding what services to provide in their villages and where these services are provided, the majority of the survey respondents (65.4% of the females and 34.6% males) rated them as only 'fairly good' (Table 7.3.1).Those who said fairly good were followed by another 61.2 and 33.8 percent of the females and males respectively who rated their involvement as 'bad'. Interestingly, most of the

respondents who rated their involvement in service delivery programmes as fairly good cited their participation in planning and pre-construction meetings (59.5% of the females and 40.5% males), whereas those who rated the programmes as bad alleged that the programmes involved 'just a few community members' (60.8% females and 39.2% males); or never involved them at all (57.4% females and 42.6% males). These statistics show that more female than male survey respondents were dissatisfied with their inadequate involvement in pre-construction programmes.

Table 7.3.1. Rating of How Safe Water Service Delivery Programmes Involve Respondents in Deciding What Services to Provide and Where

Rating	**Gender**				**Total**	
	Males		Females			
	n	%	n	%	n	%
Fairly good	84	34.6	159	65.4	243	100
Bad	54	38.8	85	61.2	139	100
Good	31	41	45	59	76	100
Very bad	21	51.2	20	48.8	41	100
Cannot tell	28	29.4	67	70.6	95	100

Source*: Field findings, August—December 2011*

FGDs and IDIs showed that the procedures followed by NGO and government actors and their reputation influenced men and women's participation in the pre-construction (and selection) of water technologies.

> *...the MMM did not ask us about the kind of water technology that we want to have in our village. We just heard the Village Chairperson talking about plans for a shallow well. In fact we just saw the well being sunk in our village afterwards. We were asked about the possible site, and one of our village members, a man offered his land.*
>
> (Women's FGD, Kibuye Village)

> *I do not know any training or meeting that was conducted by government before they constructed our pump* [deep bore-hole]. *They only asked our Village Chairperson to mobilise a few people for some training, and this was after the pump had been constructed.*
>
> (Female FGD Participants, Kanyogoga Village)

> *Unlike the steps taken by NGOs, government just sets up pumps* [deep bore-holes] *without consulting us. This was the case for our pump and similar ones in the Parish. Government does not follow up on the likely water users, nor the water user committees. It does not even train the committees on how to manage and maintain the pumps.*
>
> (Men's FGD, Kibuye Village)

A Key Informant further highlighted the above issues, blaming local government's use of threats in providing the technologies in case of 'resistant' villages and engineering errors for the many malfunctioning deep bore-holes in the Parish.

> *In the past, the District/Sub County have constructed bore-holes without first asking the community if they need them* [contrary to the procedures of the demand-driven approach]. *The officials just come and say, we are going to give you a water source. They even threaten to give bore-holes to other villages in case the village in question refuses to have them. This is why most of the bore-holes in the villages here are not functioning...it is because they were not demanded by the people. There were also some errors in engineering or siting of the bore-holes as well and this is one of the reasons why some of them are not working.*
>
> (Male Parish Key Informant)

Indeed, another Key Informant confirmed the rather 'tyrannical' procedures followed by government actors before constructing water points, but also mentioning efforts to sensitise communities about the difficulties women faced as household water managers.

> *The Sub County authorities - the Chief, Sub County Health Assistants and the Hand Pump Mechanic know how to identify an appropriate technology for a particular village. After the Sub Counties have submitted their names to us, we then go to the ground and verify if their proposed technologies are appropriate. If appropriate, we indicate it in our work plan...and before we establish a water facility in a community, we conduct meetings with local authorities, sensitize them on the importance of the water facility and tell them to make by-laws which should be gender balanced since ladies suffer more in case of deficiency of water in a homestead.*
>
> (Male District Key Informant)

Turning to pre-construction meetings, FGD participants revealed that men were more enthusiastic about attending the pre-construction meetings and related activities of NGOs because of their higher expectations at the beginning of the projects (as the men sometimes did

not know the agenda prior to the activities), and the financial benefits that NGOs provided, such as 'transport allowance' and 'lunch allowance' which were rarely provided by the Sub County and District service providers.

> *The first meeting we had before our shallow well was sunk* [by MMM] *was attended by both men and women. Men turned up in bigger numbers possibly because many of them did not know the agenda of the meeting before hand.*
>
> (Women's FGD, Kibuye Village)

> *More men than women attended the very first meeting we had prior to the MMM constructing our shallow well. Men turned up in big numbers because they had heard that it was about the new shallow well, they were excited and wanted to know more about it. So they regarded this meeting as very important because of the new development* [an "improved" water source] *that was coming to our village.*
>
> (Female WUC member, Misaana Village)

Another participant in the men's FG in Kibuye Village noted: "*Men only come for meetings when they hear that there is something that is going to be given, such as money or any other items"*. Other rather parallel reasons were highlighted by some Key Informants, who also explained some of the general procedures that preceded provision of the "improved" water technologies:

> *...the community* [prospective water users] *has to apply to us requesting for a shallow well. We consider our guidelines and prioritise communities within our area of operation. We first meet the community leaders and ask them to mobilize the entire community for training and sensitisation on all the benefits of the shallow well, the conditions, and their roles and responsibilities. When they agree with the terms and conditions, we begin the construction phase. At this stage, it is men who mostly attend* [the sensitisation or training] *because they expect us to facilitate them. But in the due course* [later post-construction processes such as maintaining the shallow wells], *women participate more than men because they suffer most in terms of fetching water especially when the wells have broken down.*
>
> (Male NGO Key Informant)

> *In Makondo Parish, NGOs tend to get more people whenever they invite the community for any discussion. This is because NGOs offer free facilities and other allowances.....before we construct a water*

> *facility* [bore-hole], *we meet the community and women turn up in bigger numbers. Men's turn-up is low because they believe that water is collected by women and children... But after construction, these numbers reduce, although not as much for the female community members.*
>
> (Male Sub County Key Informant)

Therefore, it appears that although not faultless, NGOs consulted communities more before constructing water sources, and coupled with their better reputation in water service delivery and their ability to provide various forms of facilitation to water users attracted both men and women. Conversely, government actors rarely consulted the communities; they often decided for them the technologies that they should have and often met with male-dominated local authorities such as Village Chairpersons and other members on village committees. These and their poorer reputation led to men's rejection of government's pre-construction processes.

Previous research on community participation in pre-construction activities and choice of water technologies, and especially the gender differences therein are rare. A study that attempted to answer this issue, done in rural Zimbabwe, observed that 'men and women equally made decisions' over the siting (and construction) of water points (Makoni *et al.* 2004:1291), which is contrary to the current study. Another study in Masulita, in Wakiso District in rural Uganda only reported 'the community's' preference for protected springs as opposed to hand pumps because the latter were more expensive to maintain (Kanyesigye *et al.* 2004). Another study in two districts in Northern and Southern Uganda showed that men generally dominate decision making processes on the type of technology to be used in water supply and the location of the technology (Ademun 2009), which corroborates with the observations of this study, but does not clearly state how, nor other pertinent aspects of representation in the pre-construction meetings for example. Thus, the findings of this study on men and women's participation in preconstruction and choice of water technologies are interesting, as they reveal differences in what motivates the two gender groups. It appears that whereas women were more enthusiastic through attending all pre-construction activities regardless of the service provider in question and other benefits, men's participation hinged on the reputation of the service provider and the financial gains. It is for this reason that more men than women participated in pre-construction activities of NGOs for example and shunned government service providers. Also, the gender insensitive procedures

followed by some key government actors at Sub County and District level in a way limited women's ability to decide upon their preferred water technologies, especially when they prefer to engage the predominantly male local leaders (at the expense of the male and female water users) before establishing bore-holes. I now turn my attention to participation in the establishment of the "improved" water points.

7.3.2 Representation in Actual Establishment or Construction of "Improved" Water Points

Again, following the theorisation of water planning, or strategic infrastructural decisions by Panda, Lockwood and Rydhagen, involving men and women in the establishment of water technologies is one of the potentially transformative participatory and sustainable water governance processes. Local water policies (e.g., GOU 1999; 2011) also state that both women and men should be involved in the construction of "improved" water points.

In the previous section, we have noted that men and women's involvement in pre-construction meetings of "improved" water sources depended on the service provider, and that women attended the subsequent activities more than men. However, men tended to dominate the activities involving the actual construction or 'sinking' of the water points. Men were traditionally and locally presumed to be more 'energetic' and this guaranteed them higher presence in setting up the water sources compared to women. FGD participants noted that communal activities that required a lot of 'physical force', such as the construction of "improved" water sources (and carrying of materials such as bricks) were a preserve of men.

> *It was mainly men who attended and participated in the construction of our shallow well. This was because men have more physical energy than women. The construction work itself was strenuous...it involved carrying bricks, stones, gravel and lifting pipes and other metallic parts of the well, tasks which are best performed by men.*
>
> (FGD with WUC, Misaana Village)

> *During the construction of our shallow well, men worked more than women. They* [manually] *dug the hole where the shallow well was sunk and carried gravel and stones for the concrete that was used. Women did lighter tasks, although a few also carried gravel. Women brought food for the male builders and also cooked it.*

(Women's FGD, Misaana Village)

The above analysis shows that despite their lesser numbers, the women who attended the construction of improved water sources also participated in what was perceived as less strenuous work, such as cooking food for the labourers, or what Coles and Wallace described as 'ancillary labour'. Indeed, during the field work, the local patriarchal ideologies were observed, particularly men's higher involvement in the repair of a bore-hole (an activity that required similar tasks as those undertaken during construction) in Kanyogoga village. The Chairperson of the village had informed the community before the actual repair, and it was male water users, about 11 in number including a few youths, who turned up. They helped the HPM to lift the tool box to the site, open up the bore-hole and also lift the 15 pipes. In his own words, the HPM said: "*It is very difficult to repair a bore-hole without the presence and help of male community members. Men are more energetic than women and can help you to lift the tool box and the tools"*.

It should be noted here that apart from men's dominance in construction activities, pre-construction decisions earlier made by the communities together with the local government and NGO actors were sometimes disregarded. Some water sources were constructed at different and sometimes controversial sites, to the detriment of women and children's access to water. This also affected the ability of WUCs to collect repair fees and manage the water sources sustainably. For example, we saw in Chapter Five (Sub-section 5.3.1) that in Kiguluka village, a bore-hole was allegedly constructed at a different site, leading to the denial of poor women and children physical access to the water source and the confiscation their water containers. A Village Key Informant also noted that a shallow well in Kibuye Village was abandoned after it pumped salty water, or water with 'a lot of iron' following the HPM's decision to declare the original site as unsuitable.

Studies on gender and participation in the establishment of "improved" water points are few. Previous studies on participation in construction of rural water points in Uganda have largely been gender blind. For example, they only note that 'community members' make in-kind contributions or provide construction materials and food items (e.g., Ademun 2009:20; CREAM

2009, respectively) without analysing men and women's roles in the actual construction of "improved" water sources. However, there are similarities between the rather patriarchal attitudes and stereotypes that limit women's participation in the construction of water points expressed in this study and the 'male-centred' construction of irrigation water sources in rural Thailand. Men's domination of construction activities, coupled with women's negative attitudes towards the activities prevented women from playing significant roles, and also totally eliminated them from river basin committees (Resurreccion *et al.* 2004:527). It is to women's membership in WUCs that we now turn.

7.3.3 Where are the Women? Membership and Roles in WUCs

According to Agarwal (1997), Cornwall (2003, 2008) and Cleaver (2004), the representation of women (or the disadvantaged) in decision-making in development, collective action institutions or natural resource management groups occurs through being members in the groups or committees. More expressly, institutions such as formal water-user groups and water management committees[36] are key decision-making arenas in which the inclusion of men and women in water governance can be assessed (Plummer and Slaymaker 2007; Singh 2008; Cleaver and Hamada 2010), and in which women can assert control over their own lives (Cleaver 2004). Women's membership in water committees may, however, be shaped by what Foucault (1977) calls acquiescence, as well as patriarchy, or a 'cultural message' that instructs women to view themselves as shy, having self-doubt and lacking entitlement (O'Grady 2005).

Under Uganda's CBMS and Makondo Parish in particular, there are WUCs, which are the established and recognised organisations responsible for the proper management, operation, maintenance and sustainable use of "improved" water sources (e.g., GOU 1999, 2011). Thus, two important aspects of membership (or representation) in water governance were explored in Makondo Parish: the existence and functionality of WUCs, and their members (and the roles of these members).

Existence and Knowledge about WUCs

[36] Also described as more robust and long-lasting by social theorists, e.g., Ostrom 1990.

Whereas all the "improved" water sources in Makondo Parish had WUCs, many of them were inactive. The committees were inactive because of their failure to act promptly whenever the water sources broke down, failure to convene regular meetings for water users to know the committee members, *inter-alia*. The presence of WUCs was confirmed by the majority of survey respondents (36.5% and 32.2% of the males and females respectively), as well as village Key Informants, and FGD and community meeting participants.

However, a higher number of female survey participants (43.5%, compared to 35.6% of the males, Table 7.33a) were completely unaware about the existence of WUCs for water sources in their villages. These answered 'no' or 'I don't know' when asked if their "improved" water sources had WUCs.

Table 7.33a. Knowledge of WUCs for Improved Water Sources *(n=601)*

Whether Improved Source has a WUC	**Gender**			
	Males		Females	
	n	%	n	%
Yes	81	36.5	122	32.2
No	56	25.2	113	29.8
Do not know	23	10.4	52	13.7
No improved source	62	27.9	92	24.3
Total	**222**	**100**	**379**	**100**

Source*: Field findings, August—December 2011*

This could mean that these women never participated in any water gatherings and had no chances of being represented or voicing their interests in local water management. Furthermore, knowledge of the existence of WUCs varied by the location of respondents' households and their resident villages. The association between awareness of the existence of WUCs and location of households in the entire Parish was significant, $\chi 2$ (6, N=213) = 28.49, $p<0.01$, with respondents from households in trading centres being more ignorant about WUCs (53.6%)[37] compared to

[37] Perhaps due to their preoccupation with their shop or trading businesses and less interest in water meetings as many of them bought water from vendors, as observed in Chapter Six.

those from households that were completely off-road. Also, there was a significant relationship between awareness of the existence of WUCs and the four case study villages, $\chi 2$ (12, N=213) = 38.5, $p<0.01$. Kanyogoga village had the highest number of respondents who had no idea that WUCs existed (62.5%), followed by Makondo (51.4%), while Misaana had the least number (33.4%). The high level of unawareness about WUCs in Kanyogoga village was perhaps due to the fact that the village's bore-hole, also the main "improved" water source often broke down. At one time the bore-hole spent almost seven years without functioning, meaning that the WUC members were not as active and even never met for this entire period. As a result, most of the bore-holes' water users could not recall their WUC members. Interestingly, another half of the respondents from Makondo village who had no knowledge of their WUC relied on the protected spring as their main source of water, while the WUC for the shallow well in Misaana, a village with a higher awareness about WUCs in their midst was reported as the most effective in Makondo Parish, as expounded in the next sub-section.

Membership on WUCs

As noted at the beginning of this sub-section, the membership of marginalised groups or assigning them management roles in water institutions such as WUCs provides spaces where the voices of the marginalised can be heard in water governance (e.g., Singh 2008; Cleaver and Hamada 2010). Uganda's NWP and NFOMRWS also stipulate that females should make up 50 percent of the elected representatives on WUCs, and that at least one of the key positions[38] on the committees should be held by a woman.

Indeed, more male than female community members occupied positions on WUCs (including key positions) in Makondo Parish. Of all the 602 survey respondents, only 10 disclosed that they were members of WUCs for particular "improved" water sources in their villages. At least three of these individuals were from the villages where in-depth analysis of WUCs was done – one from Makondo and two from Misaana. Also, seven of the ten were women (three *dejur* female household heads and four *de-facto*), but these did not provide a clearer picture of the entire Parish. Most of the survey respondents who knew that their "improved" water sources had

[38] These include Chairperson, Vice Chairperson, Secretary and Treasurer as explained in Chapter Two

WUCs admitted that the committees had more male than female members (59.7% and 66.2% of the female and male respondents respectively). With the exception of Kanyogoga village where most respondents (66.7%) were not sure or did not know the composition of their WUCs, the respondents from two of the four case study villages (Kibuye and Makondo, 63.6% and 85% respectively) also said that men dominated membership of WUCs. It was only the respondents from Misaana village (36.8%) who rightly alleged that their WUC was dominated by women; otherwise a further examination of the four case study villages showed that three out of four committees were dominated by men, with few women occupying key positions (Table 7.3.3b).

Table 7.3.3b. Selected WUC Members in Makondo Parish by Gender

Village	Water Technology	Position(s)	Gender
Makondo	Protected Spring	Chairperson, Treasurer, Information/Publicity	Males
		Secretary**	Female
Kanyogoga	Bore-hole (malfunctioning)	Chairperson, V/Chairperson, Secretary*, Treasurer, Care taker*, Member	Males
		Information/Publicity	Female
Kibuye	Shallow well (malfunctioning)	Chairperson, Secretary, Treasurer, Care taker	Males
		V/Chairperson, Information/Publicity, Care taker	Females
Misaana	Shallow well (functioning)	Chairperson, Care taker, Information/Publicity	Males
		V/Chairperson, Secretary, Treasurer, Member	Females

Source*: Field findings, November—December 2011 and January—February 2012;* *RIP; **migrated

As shown in Table 7.3.3b, all the WUC Chairpersons were men. Only five women occupied the other key positions and three of them were on the WUC for the shallow well in Misaana village, the only committee that had more women than men. Interestingly, some Parish Key Informants (and a few survey respondents) opined that the WUC for Misaana's shallow well was one of the most active in Makondo Parish, arguing that it collected repair fees promptly and acted swiftly whenever the pump broke down. The women on the WUC reportedly had good mobilisation skills (particularly the Treasurer and Secretary), a fact that was confirmed in the community meeting by a number of water users. These qualities were also reported by survey respondents that used a shallow well in Kayunga Village, which was said to have had at least three female members. Participants in the meeting also concurred that female water users were more willing to pay the repair fees compared to the men, and this seemed to be the case in the other three case villages. The leadership qualities of women on WUCs were also generally echoed by some Key Informants as being key in improving the performance of the local water organisations:

> *Women on water user committees perform better than men. They possess a spirit of ownership of the water facility that is unlike that of men. Men have little time for water-related community work.*
>
> (Male Parish Key Informant)

> *Communities that have many women on their committees seem to have their water sources functioning well for most parts of the year. I have examples of Kengwe and Tagga villages that I know very well in Kingo Sub County* [another Sub County in Lwengo District]
>
> (Male District Key Informant)

The survey respondents, FGD participants and Key Informants disclosed some non-inclusive processes and patriarchal ideologies that privileged men, hence men's domination of WUC positions. The processes through which WUC members were elected seemed to favour men, as some like the one that ushered in WUC members of the protected spring in Makondo Parish were perhaps not legitimate and served to guarantee the exclusion of women. The female FGD participants (all of whom used the protected spring) complained:

> *Our current water user committee members were elected when a few people had gone to clean the protected spring* [many were men as local norms assigned them this role]. *While they were there, elections were organised. So the committee members we have were elected in the presence of only a few people who had gone to clean and de-silt the spring.*
>
> (Women's FGD, Makondo Village)

This means that the process and timing of the election of the WUC members of the protected spring was 'functional' or 'instrumental' (e.g., Pretty 1995 and White 1996, respectively); the meeting was attended by men, who, as we have seen in Chapter Five and Sub-section 7.3.2 attended cleaning (and de-silting) meetings and did most of the direct labour involved more than women. Closely related to this were the culturally embedded ideologies that reasserted men's superiority over women with regard to representation on WUCs for deep bore-holes and shallow wells. For example, both female and some male survey respondents reasoned that men had more physical energy or were more 'energetic', a quality that made it easier for them to perform tasks required of members on WUCs, such as helping in lifting heavy parts of the hand pumps (e.g., whenever the HPM was doing repairs) or even doing minor repairs on the pumps as required for one to be a Caretaker. Many female respondents also stated that some of the tasks of the WUC

members required unwavering or 'strong personalities'. They gave examples of Caretakers, who routinely supervise the pumps to control misuse by children and also discipline stubborn children; and that of Chairperson, Information/Publicity Officer and other positions in general, which require one to move from household to household collecting repair and maintenance fees, or even wait for water fetchers from defaulting households (at the "improved" water sources) so as to convince or sometimes 'forcefully' collect fees from them. Similar sentiments were expressed in FGDs, including disrespecting women who hold key positions in WUCs.

> *The Chairperson of our shallow well has to be a man because he commands more respect. People tend to undermine us* [women] *if we take up such a position. Men undermine us most. They say 'how can a woman ask me to go to for a meeting?' Even the Caretaker needs to be a man because when a man talks, he can be listened to and will not be disrespected. If a woman becomes a Caretaker, the people who come to collect water will abuse her even young boys can abuse you.*
>
> (Women's FGD, Kibuye Village)

While explaining the procedures followed in electing WUCs prior to constructing "improved" water sources, Key Informants mentioned other personal factors responsible for women's low representation on WUCs:

> *We try to emphasize the fair representation of women on the water user committees, including the four key positions of Chairperson, Vice Chairperson, Treasurer and Secretary. But in most of the communities, women are shy.... In some communities, we even fail to get women who can volunteer to be on the committees and yet we cannot force them. Basing on my experience, I usually get only two women who are willing to be on the committee.*
>
> (Male NGO Key Informant)

> *When we are electing water user committees, we want women to at least hold some key positions. For example, women are very good at keeping money and making accountability, and so a lady can be chosen as a Treasurer. We also need somebody from the political wing, who is at least someone from the Village Local Council, and a youth. A Local Council person on the same committee can help women to enforce the by-laws, while a youth can guide his fellow youth. The only challenge we face is that women fear to take up these positions...When some people in the meetings nominate them for various positions, they say no, not me.*

(Male District Key Informant[39])

Another Key Informant concluded:

> *Women can take up these positions* [on WUCs] *but after being sensitised. Among the Baganda* [the dominant ethnic group in Makondo Parish]*, there are many beliefs that make women inferior to men, and these prevent women from taking positions on water committees.*
>
> (Male Parish Key Informant)

From the above analysis, it is clear that non-inclusive or less democratic election processes, cultural beliefs that hold women as inferiors, women's acquiescence or tepidness and fear of being regarded as inferior limited their courage and ability to serve on WUCs, hence contributing to their under-representation.

Knowledge about Composition of WUCs

Given the state of affairs on existence and membership of WUCs discussed above, it was important to find out whether the water users in Makondo Parish knew the positions on their committees, the actual office bearers and their composition by gender, as outlined in local water policies. Generally, although most of the survey respondents were ignorant about the gender composition of their WUCs, women seemed to be more knowledgeable. For example, only 28.5 percent of all the survey respondents mentioned at least one of the positions on their WUCs, the majority of whom were females (57.5%). The most mentioned position was that of Chairperson (64.6% of the females and 57.5% males); the other positions being Caretaker, Treasurer and Secretary in that order. The position of Vice Chairperson was only mentioned by one individual, while others such as Ex-Official (technically the Village Chairpersons) and Information/Publicity Officer were not mentioned at all, yet the former were also key in the functioning of the "improved" water sources, as discussed in Chapter Five. However, the only two survey respondents that ably listed all the WUC positions and their occupants by gender were men from

[39] This Key Informant noted yet another position that is provided for in the local water policies but was not found on any of the WUCs in Makondo Parish, i.e., Youth representative. The Youth Representative serves to present the views and interests of youths and young people, many of whom collected water with their mothers or women, as examined in Chapter Five.

the villages of Misaana and Kiganjo; these men were later found to have been members of the WUCs in question, so perhaps they naturally had to know their colleagues.

Perhaps the major reason why most of the survey respondents did not know their WUCs and the positions was that the committees rarely held meetings with the water users, and there was worse record in committees that were inactive or that never took steps to repair the pumps whenever they broke down, as noted under the existence of the WUCs in the case study villages. It is important to note here that whereas a number of the survey respondents did not know the WUCs or their members, many knew the Village Chairperson or village committees, which again shows the recognition that the former, as local administrative institutions had, hence their higher power and influence in improving access to water. Furthermore, 77 percent of the survey respondents did not know about the exact percentage of men and women that ought to constitute their WUCs. Of the 23 percent in total who had an idea, only 31.7 percent of the females and 25 percent males knew that a WUC ought to have an equal number of women and men[40].

It is clear that whereas Makondo Parish has WUCs for most of its improved water sources, many are inactive due to failure to convene meetings (and other O&M factors), a finding that is in line with earlier research in much of rural Uganda, where several committees were also found not to be functioning for similar reasons (e.g., Kanyesigye *et al.* 2004; Asingwire 2011; GOU 2011b:vii) or because of 'low morale' of WUC members (GOU 2009:85). The findings on men dominating most of the positions on WUCs, especially key positions such as Chairperson, are in line with those of earlier work in Africa. For example, in rural Northern Ethiopia, water committees had no woman Chairperson (Ebato and van Koppen 2005b), while in many parts of rural Uganda, key positions of Chairperson, Secretary and Vice Chairperson are dominated by men (e.g., Ademun 2009; Asingwire 2011:24,31-32; GOU 2011a:18). There is also evidence that the number of rural WUCs in the country with women holding key positions has been declining since 2009, and that is now stands at 75 percent (GOU 2010b:2011). Surprisingly, the study in Northern Ethiopia also reported that there was equal representation of men and women on each

[40] 50 percent, as outlined in the revised NFOMRWS; earlier versions and policy documents hinted at 33 percent for female WUC members, and some respondents and Key Informants mistakenly took it as the recommended composition.

water committee (three each), while another study in rural Zimbabwe showed that bore-hole and deep well committees were dominated by women (Makoni *et al.* 2004:1293). These two studies are not consistent with this study, as most of the WUCs were dominated by males, who also occupied most of the key positions. Further, there could be some dissimilarities between the 'individual' or 'personal' factors that limit women's representation in WUCs observed in Makondo Parish and those described in earlier findings. Whereas this study has revealed disciplinary, normalising and patriarchal factors such as women's timidity, 'shyness' and lack of consciousness reflected in their self-doubt, 'fear' or unwillingness to take up positions on WUCs, earlier observations in Africa and Asia showed that education, age and marital status affected women's representation in water committees (e.g., Cleaver and Hamada 2010) or other natural resource management groups (e.g., Pandolfelli *et al.* 2008; Nuggehalli and Prokopy 2009). Also, Ebato and van Koppen found out that women's low literacy levels, or their inability to read and write, limited their chances of becoming chairpersons of water committees in rural Ethiopia (2005:11), a fact that this study has not been able to establish directly.

There are also other results of this study that corroborate with previous work. For example, it is encouraging to compare the overlapping roles, such as the Village Chairpersons in Makondo Parish also serving as members on the WUCs[41] with research in Ethiopia, which reported similar overlapping roles for a male village chairperson (Ebato and van Koppen 2005), but which was not stipulated in local water policies as is the case in Uganda. The finding on the committees with more women (some of whom also occupied key positions) being more active in Makondo Parish seemingly provides evidence that the higher representation of women in local water associations brings about improved vigor or governance of these institutions. This accords with earlier observations by Asingwire (2011), who further noted that women's presence on WUCs increased their functionality and performance as all the non-functioning water sources in many parts of rural Uganda did not have women on their WUCs. In addition, the results on sex-role stereotypes that hinder women's representation on WUCs in Makondo, and more so their ability to occupy key positions, such as men being more 'energetic', having stronger personalities and commanding more respect support previous research that has highlighted similar stereotypes. For example, Zwarteveen *et al.* (2010) single out women's perception of men as traditionally more

[41] This is provided for in Uganda's NWP

powerful and better placed to sit on water committees as a major factor that hampers their representation on the water management institutions. Another study in rural Ethiopia revealed men's superiority in 'dealing with conflicts and making decisions', which was also mentioned by women themselves, as one of the reasons why there were no female Chairpersons and Vice Chairpersons of water committees (Ebato and van Koppen 2005).

Studies on men and women's knowledge of rural water governance institutions are hard to come by, as previous research seems not to be gender-specific. An example is of a study in Amuria District in Northern Uganda that reported that the majority of the 'respondents' or 'communities' knew that WUCs consisted of seven members, and that they rightly mentioned some of the functions of the WUCs, such as collecting maintenance fees (Ademun 2009). This study has demonstrated that more women than men were unaware about the existence of WUCs for "improved" water sources in their villages, but again the former had more knowledge about the exact positions and required gender composition or quota of WUCs. The next section further looks at the 'transformative' potential of WUCs.

7.4 Exploring Transformative Participation in Local Water Management

7.4.1 'Participatory Exclusions'? Presence in Decision-Making

As theorised by White (1996), transformative or 'empowering' participation offers the practical experience of being involved in considering options, making decisions and taking collective action against unfairness. Agarwal (1997) and Cornwall (2008) add that this involves an individual's ability to attend or be 'physically present' in an activity, or in this case, the physical presence of men and women in local water governance spaces (e.g., Franks and Cleaver 2007; Singh 2008; Cleaver and Hamada 2010). I explore these in the formal arena in Makondo Parish, where gender sensitivity in community participation and involvement in 'all levels of decision-making' (including post-construction and maintenance) is a pre-requisite (GOU 1999, 2011). I begin with mobilisation as an aspect of setting arenas for considering options in WUC Meetings.

Occurrence of Meetings and Invitation

In the previous section, we have noted that the irregularity of water committee meetings was a major factor that determined their effectiveness, and that women were less represented on the

WUCs. Thus, before understanding the conduct of the meetings and who convened them and who was invited, it was necessary to ascertain how often the meetings themselves occurred.

Unfortunately, meetings between water users (or 'beneficiaries' as they are referred to in NFOMRWS – GOU 2011) and their WUCs rarely occurred in Makondo Parish. The majority of the survey respondents (46.1% male and 44.9% female) revealed that the meetings never took place, while only 7.4 percent and 8.1 percent of the male and female survey respondents respectively admitted that the meetings occurred twice or more times a year in their villages. These assertions were affirmed in most of the FGDs, and by some Key Informants, for example:

> *We always encourage the water user committees to meet regularly and make reports to their respective communities of water users, but they often fail to do so. Instead, they tend to meet when there is a break down* [that is, when a pump has broken down]. *In fact, it is not good for them to wait for a break down in order to meet or raise contributions from the community.*
>
> (Male NGO Key Informant)

Indeed, more in-depth investigations in the Parish revealed that WUCs rarely met with water users, and when they did so, it was because the "improved" water sources, particularly pumps (bore-holes and shallow wells) had broken down. This therefore means that the spaces and places where women and men would dialogue on issues of their interest in water were limited in Makondo Parish.

Turning back to the invitations for the WUCs, KIIs and FGDs revealed that Village Chairpersons (sometimes with a few members of the village council or WUCs) convened the few water meetings that took place in Makondo Parish, and also had the responsibility of inviting water users. As we saw in Chapter Five, unless they worked with Village Chairpersons, it was very difficult for WUCs to convene meetings. It was also reported that efforts were always made to invite mature household members, both men and women to the meetings. However, the turn-up rates for these meetings were low, especially for men, and also depended on who invited the water users. Men's attendance tended to be higher upon being invited by the Village Chairpersons, whom they regarded highly as they held the highest authority in their villages. By virtue of their authority Village Chairpersons had more power to both invite and convene water-

related meetings than the WUC members or Chairpersons. It should be remembered here that all the Village Chairpersons were men, and the WUCs were also male-dominated. The question of men and women's representation in the meetings is handled below.

Presence in Water Meetings

In the previous discussion, we have seen that WUC meetings for the operation and management of "improved" water sources were rarely convened. Responses to the survey show that frequency was a problem, as about 90 percent confirmed that WUC meetings never occurred twice or more times a year. Despite the few times water meetings occurred, it was important to find out how inclusive these local spaces were.

Interestingly, more women than men were reported to have been physically present at water meetings in Makondo Parish. About 49.1 percent and 39.2 percent of the male and female respondents said most of the water meeting attendees were women, a scenario that held for respondents from three of the four case study villages, with the exception of Kanyogoga where the results were mixed. Most of the FGD participants and Key Informants also confirmed that water meetings were mainly attended by women. This fact was also reflected in the community meetings conducted in the case study villages, where women out-numbered men. Unlike women, men slowly and quietly departed from the meetings as they went on and by the time a meeting was concluded, it had significantly more women. For example, the Village meeting in Makondo had about 30 men and 33 women at the beginning, but only 15 men had the patience to continue until it ended.

Several reasons were given for women's higher attendance of water meetings, many of which highlighted differences in household or gender roles, expectations and behaviour. Forty percent of the survey respondents argued that women 'cared most about water in households', while another six percent thought women were most affected whenever water was not available in households. Many female (and some male) survey respondents also alleged that women attended water meetings because 'almost every activity/task in the household requires water', and that these tasks revolved around women. Similar observations were made by FGD participants, with

both males and females attributing women's higher attendance of meetings to their household water management roles (Table 7.4.1a).

Table 7.4.1a. Summary of FGD Participants Views on Women's Higher Attendance of Water Meetings *(n=99, 52 females and 47 males)*

Men	Women	Both
• They have to attend water meetings • They are always at home	• Care more about water in the household • Undertake most of the household water-related tasks • They fetch Water	• More concerned about water in the household • Responsible for water availability/management at home • They are the ones who fetch water (together with children)

Source*: Field findings, November—December 2011 and January—February 2012*

Considering the separate views given by men and women, it is clear that women's higher attendance of water meetings related to their domestic water roles as well as their 'restricted' movement. For example, men argued that women attended water meetings because 'they are always at home'. Below are some of the issues raised in FGDs on women's attendance of WUC meetings:

> *Most of the meetings we have been having since our bore-hole was constructed are attended by women....It is us who are responsible for all water-related issues in the household...We are more concerned about water because we fetch it* [with children]. *Do men collect water?...They just sit down and wait for us to give them water for drinking and bathing...You are the one who fetches water, washes utensils, bathes the children, cooks and everything else you wash requires water. So it is our concern and responsibility for water in the households that encourages us to attend water meetings.*
>
> (Female FGD Participants, Kanyogoga Village)

> *We attend water meetings more than men because we care more about water. Men do not care about water and so prefer to do their own things when meetings are called. Men do not care about where and how you get water...all they want is water in the household. When the shallow well breaks down, it is us who walk a distance of over one kilometre to Misenyi* [a neighbouring village] *to fetch clean water from another* [functioning] *shallow well.*
>
> (Women's FGD, Kibuye Village)

Key Informants further explained why women attended water meetings more than men:

> *It is women who attend water meetings because they usually stay at home. Women are more responsible for water issues compared to men. Men's work is to clean wells and desilt them because they are more powerful and are stronger than women.*
>
> (Male Village Key Informant)

> *Women attend water meetings more than men. Women use water most and suffer the consequences if water is not available. In fact, when water is not available, you can expect domestic violence to occur in a household* [i.e., men becoming violent against women]. *Our people* [indirectly referring to men] *are so ignorant* [about the meetings and their importance] *and I urge the government to organise sensitization programs so that men can attend water meetings.*
>
> (Male Village Key Informant)

On the other hand, both male and female FGD participants attributed men's low attendance of water meetings to laziness, men's mobility compared to women, limited interest or indifference and the lack of monetary or other material gains (Table 7.4.1b).

Table 7.4.1b. Summary of FGD Participants Views on Men's Low Attendance of Water Meetings *(n=99, 52 females and 47 males)*

Men	**Women**	**Both**
• Some are illiterate/not well educated • Have limited concentration/patience • Work far away • Personal or family problems, e.g., loss of a relative • They are not notified or informed in time	• Do not care about water in the household • Claim to be 'busy' • Pretend to have other issues to work on e.g., trading businesses, visiting friends • Send women (spouses) or youthful girls to represent them	• Just lazy • Mobile/move or travel a lot • See water meetings as irrelevant/immaterial • Lost interest in water meetings • See no monetary/economic gain

Source*: Field findings, November—December 2011 and January—February 2012*

However, from Table 7.4.1b, it also appears that there were some differences in women and men's views with regard to men's low attendance of water meetings, which again pointed at household gender roles and women's subject position. For example, men claimed that as household providers, they do not have the patience to sit (for several minutes or a few hours) in water meetings because they have to move around looking for money to fend for their families. The female FGD participants on the other had suggested that men's low attendance of the

meetings was due to men 'not caring about water in households', which was why men let them attend the meetings. Women also added that men preferred to send them to represent them, 'claimed to be busy', or pretended to have other issues to work on'. In their own words, the FGD participants said:

> *Men also attend water meetings but not as often times as women. Women are more responsible for water .When a meeting is called, men tell their wives/partners that 'you go and learn this and that, go and learn how you can fetch water and other things.*
>
> (Male FGD Participants, Kanyogoga Village)

> [In response to the above] *You can tell your husband that there is a water meeting on such and such a day and then he says 'I will not be around...you will go and tell me whatever will be discussed'*
>
> (Female FGD Participants, Kanyogoga Village)

> *Men do not attend meetings because they work far away. Other men send their wives saying 'you go, you will tell me whatever they will have discussed' Men pretend that they have no time and that they are busy working or need to work more. But many people do not attend WUC meetings because of ignorance, so they need to be sensitised.*
>
> (Women's FGD, Makondo Village)

Men's indifferent attitude towards water meetings was echoed in the FGDs:

> *Men think that attending water meetings is not important to them. They pretend that they are going to look for money, money which we do not even see because they do not get it as such.*
>
> (Men's FGD, Kibuye Village)

> *Men see no value in attending water user meetings. They prefer to attend political meetings, or meetings summoned by politicians* [e.g., Sub County Chairperson or the area Member of Parliament] *because they know that they will be given free food and drinks* [such as beer and other alcoholic drinks].
>
> (FGD with WUC, Kanyogoga Village)

In some cases, overlapping reasons were given for low attendance at meetings by both men and women. For example, female FGD participants from Misaana and Kibuye villages as well as WUC members (for the shallow well in Kibuye and bore-hole in Kanyogoga) blamed poor

mobilisation and 'not informing water users in time'. In fact, many male and female FGD participants and WUC members called for better ways of mobilising them to attend water meetings. The other issues raised by the FGD participants included sensitisation on water use and storage; setting up and implementing by-laws for managing "improved" water sources, especially on payment of O&M fees; and training of WUC members on their roles, *inter-alia*, so as to bring about better representation of both groups.

The above results show that WUC meetings rarely occurred in Makondo Parish, and for the few times they occurred, the major precursor was break down of the pumps or suspected leakages in the case of the protected spring. This finding is consistent with other studies in rural Uganda, which also single it out as one of the reasons why the participation of community members in water management is ineffective (e.g., GOU 2009; Asingwire 2011). Very little was found in the literature on convening (or the 'power' of inviting) water users for meetings, but this study has again demonstrated that this task is dominated by men, through their influential positions as either WUC Chairs or members, or Village Chairpersons (most times attracting more men to the meetings whenever they carry out the mobilisation themselves). Contrary to expectations, more women than men attended water meetings. This result is surprising in the sense that earlier research has largely shown that most water meetings in developing communities are attended by men (e.g., Regmi and Fawcett 1999; Meizen-Dick and Zwarteween 1998; Odgaard 2002; Coles and Wallace 2005; Ebato and van Koppen 2005; GWA 2006; Singh 2008:935; Sultana 2009).

Women in Makondo Parish attend water meetings more than men, due to factors related to their productive roles, particularly their responsibility for household water collection, provision and management; and their lesser mobility compared to men. One of the key issues here is men's argument that because women were 'always at home', they had to attend water meetings. This shows that cultural norms confined women at home or to the 'domestic sphere' for most of the time, an immobility that denied them other 'public' opportunities in the community. These opportunities would, for example, increase women's exposure and ability to voice their concerns in water meetings. Again, this study has shown that men support women to attend water meetings, yet earlier observations suggested that men, together with other male members of their households such as sons attended meetings on behalf of their female spouses or relatives (e.g.,

Zwarteveen and Neupane 1996; Singh 2008:935). Furthermore, the findings of this study could support the premise that despite women's heavy domestic work loads, they spared some time for the more communal water meetings, unlike in other developing communities, where women's pre-occupation with household tasks has been cited as a major hindrance to their physical presence or representation in local water spaces (e.g., Coles and Wallace 2005; Ebato and van Koppen 2005:8; GWA 2006; Singh 2008:937). Another key issue that emerges from these findings is men's disinterest in attending water meetings, as discussed earlier.

7.4.2 Setting the Agenda for WUC Meetings: A Tyranny of Men?

As theorised by Lukes (1974), power is exercised not only through securing desired outcomes in decision-making processes, but also through procedures of preference shaping as social forces and 'institutional practices' of bias mobilization and control over political agenda. For example, Stewart and Taylor (1995) argue that determining which issues a community are allowed to be involved in, and controlling the agenda for discussion is a covert dimension of power central to an understanding of participation and empowerment.

Earlier in this sub-section, we saw that men determined who attended water meetings while women were more physically present in the meetings. But who then set the agenda for water meetings in Makondo Parish? Men, the major conveners of water meetings were also privileged to set the agendas of the meetings in Makondo Parish, often coming with pre-determined schemas and also dictating the tempo during the meetings by chairing them. Despite their higher physical presence, it was uncommon for female water users to set the agendas or voice their interests at the beginning of the meetings, as they often attended after being invited by men to simply provide their opinions. Asked to state the major discourses in WUC meetings, or issues that were discussed, the majority of the male and female survey participants (30% and 29% respectively) cited operation and maintenance, particularly the repair of broken down "improved" water sources, in which contributions were often sought from the water users of the water source in question (Figure 7.4.2). Next in line were issues such as cleanliness and hygiene of the water sources, safeguarding the source and then accountability for funds collected.

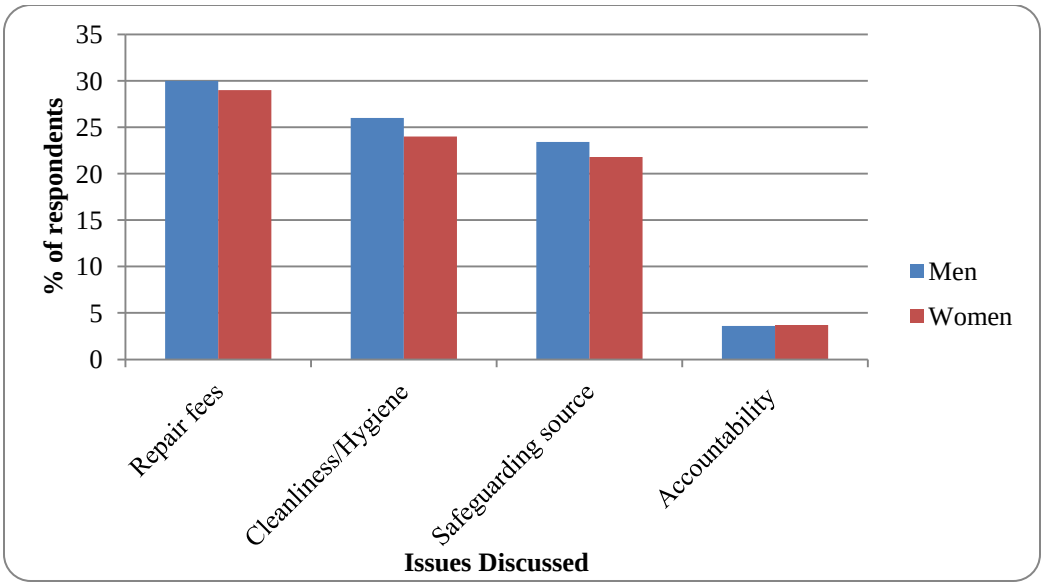

Figure 7.4.2. Major Issues Discussed in Water Meetings by Gender *(n=602)*

The fact that the issue of repair dominated WUC meetings was not surprising, as it was this same issue that in most cases prompted WUC members (sometimes with the help of Village Chairpersons) to convene the meetings for water sources that had been established for several months or years, as explained in the previous sub-section. Cleanliness or hygiene and safeguarding of the water sources also dominated the agendas of the first post-construction meetings (or when the water sources had just been handed over to the communities by either NGOS or the Sub County Local Government), and in particular the meetings for the protected spring in Makondo Village, as discussed earlier in Sub-section 7.3.3. FGDs also revealed that issues of O&M (or repair) and how the repair fees were raised dominated local water meetings in Makondo Parish. Female FGD participants from Kibuye village summarised it well, highlighting their better enthusiasm to pay the fees compared to men as noted earlier:

> *...the foremost issue that we often discussed in the meetings was the broken-down pump* [a shallow well] *and how to repair it. And of course the payment of the fees was the most important thing. We discussed the amount to ask from every individual and once it was agreed, the WUC* [Chairperson or another committee member] *communicated it to the various households in our village. And whenever you had your own money, you would pay it to the committee there and then without having to go home and asking your husband to give it to you.*
>
> (Women's FGD, Kibuye Village)

The other issues discussed in water meetings included the safeguarding of water points (perhaps related to maintenance), running of WUCs and child fights at the water sources, many of which were raised by women, as illustrated in the next section.

In reviewing literature, not much information was found on setting agendas as a process that preceded water meetings, nor the prior 'shaping' of the meetings by gender. However, the above findings accord with earlier observations in rural Thailand, which demonstrated that because water committees were regarded as 'male organisations', agendas for water committee meetings were also usually set by men, and that the meetings could only be chaired by men, sometimes with representatives from households in the villages (Resurreccion *et al.* 2004). The next section explores the place of men and women in local water spaces.

7.5 Subjugated Voices: Power and Discourse in WUC Meetings

As theorised by White (1996), Cornwall (2003, 2008) and Gaynor (2010), the ability of marginalised groups to have voice offers a potential to transform societal and gender relations and the direction of development. This resonates with Agarwal's notion of women 'being heard' in meetings and Cornwall's idea of women's ability to present their interests and whether any one listens. Correspondingly, in formal water resource management institutions, this ability to exercise voice and choice offers the potential to transform gender relations (e.g., Cleaver *et al.* 2005, Plummer and Slaymaker 2007, and Cleaver and Hamada 2010). Again here, women's power or voices in water institutions, or their ability to resist male-dominated water spaces can be affected by patriarchy, in which they may see themselves as powerless, anxious, shy or even lacking entitlement (O'Grady 2005). This is also akin to Foucault's notion of a 'normalizing gaze' in which individuals, or women in this case may behave in certain ways because men will classify and judge them in water meetings.

Thus, key issue to explore here is how water discourses were articulated in WUC meetings, and whether these were gendered. In Makondo Parish, men and women articulated different concerns and opinions in meetings of their "improved" water sources. Whereas most of the male attendees freely voiced their concerns about the repair fees for example so as to have the pumps repaired, women were not that free. First, a few FGD participants and Key Informants asserted that

women, just like men, expressed their concerns in WUC meetings and that the former's views were sometimes considered, but could only mention a few cases of the latter.

> *In the past* [1960s and 1970s], *women were reticent in all village meetings. But these days, women can raise their views in water meetings and are even capable of discussing issues better than men.*
>
> (Male FGD Participant, WUC, Kibuye Village)

> *....these days, women can talk in meetings because our communities have been sensitised about gender by various organisations and NGOs such as World Vision and the MMM. Some women even encourage their fellow women to be more active in meetings* [and other social gatherings].
>
> (FGD with WUC, Kanyogoga Village)

> *During the last meeting we had on cleaning* [and de-silting] *our protected spring, both men and the few women who attended were given an opportunity to talk. For example, I was able to speak, and I proposed a name for one of the committee members* [when electing the committee] *and it was seconded.*
>
> (Women's FGD, Makondo Village)

Key Informants also observed:

> *I think that women's views are considered during water meetings* [in Kanyogoga Village]. *During one of the meetings for our shallow well, Miss Carol* [not real name] *proposed that we should re-fence the well. Her wish was granted later on, as the committee re-fenced the well after a fortnight.*
>
> (Male Village Key Informant)

> *Some women make good contributions during water meetings for our shallow well. At one time, women who attended our meeting argued that the treasurer on our committee was 'misusing his powers' by giving his children preferential treatment whenever they went to the well to collect water. He, for example wanted his children to jump the queue. Because the women insisted, it was decided that the treasurer should be replaced by a woman and this was done.*
>
> (Male Village Key Informant)

The above expressions suggest that women in Makondo Parish spoke about issues that concerned them in water meetings. However, the majority of the FGD participants and Key Informants asserted that men generally had more power and privileges during water meetings.

Indeed, it is interesting to note the degree to which women's voices, needs and interests were subjugated in water meetings. In contrast to what has been discussed earlier, the majority of the FGD participants – males, females and WUC members – revealed that men had more opportunities to raise their views during water meetings, and that women's needs and interests were rarely implemented by the respective WUCs. They asserted:

> *In most cases here, men take the floor more than women, unless the Chairman says 'let us also listen to women'. Depending on what idea you propose during the meeting, men can challenge you. Women's ideas may not be taken into account. If a woman comes up with a good idea, there is a small likelihood that it might be considered. Women are usually dull in the meetings because they are shy. You may propose an idea and they* [men] *quash it or do not take it as important, so you also decide to keep quiet and just let the meeting move on while you only listen. Some women attend water meetings with their husbands and when the husband talks, she keeps quiet. You* [referring to women] *may say something in a meeting which a man* [husband or partner] *may not be happy about.*
>
> (Women's FGD, Makondo Village)

> *... a woman's views may not be taken seriously. For example, we raise issues concerning our children who collect water from the shallow well, such as fights between themselves and the Caretaker denying them access to the well even after we have paid repair fees. But if you talk about another child misbehaving or beating your child, some people* [in the meeting] *will not like it. They will hate you. Some women complain about the Caretakers mistreating their children and even threaten not to pay repair fees again. They say 'my child was beaten when he/she went to the shallow well and his/her jerry can was confiscated or thrown away. Some say, I will not contribute any money because my child eventually returned home without water'. On top of failing to have a consensus, the issues that we raise tend to bring more disagreements and quarrels in the meetings. The mistreatment of our children because of 'not paying repair fees' is often not adequately discussed and is not taken seriously by the Chairperson of the meeting and his committee.*
>
> (Women's FGD, Kibuye Village)

The above responses indicate that women were not entirely free to express their opinions in water meetings. Women's concerns, such as child fights (between their children) and the Caretakers at the water sources denying children physical access to pumps were not given much

priority in the meetings. FGDs further revealed that although both men and women were ultimately concerned about improving access to safe water, men were keener on simply collecting or contributing the repair fees, while women thought of the promptness of the repairs so as to minimise the likely burden of having to walk to far-off water sources to collect safe water. Women's water needs also included cleanliness of the water sources; water vessels, mainly jerry cans; rain-water harvesting technologies such as small drums; and water treatment, for example firewood for boiling water in their households. These needs were also cited by the Village Key Informants. The above observations further reveal that due to patriarchal beliefs, women were often 'shy' in water meetings and the presence of their more culturally powerful male spouses made them even less vocal and submissive. Men's power during water meetings was summed up in the following FGD:

> *In our culture, men are more powerful and women have to follow what they say. A man's decision cannot be overturned. Some women, especially young ones* [such as those who have been 'sensitised' or have attended various trainings on water and other aspects of community development] *do not know what they need to do to achieve what they want. They think they should also give rules and do everything that men do.*
>
> (Male FGD Participant, WUC, Makondo Village)

This shows that women's participation in water governance, particularly in meetings was being challenged by patriarchal beliefs, and that men felt uncomfortable with women's articulation of their voices and interests. A Key Informant further explained how training or attendance of relevant sensitisation workshops gendered abilities in effectively communicating interests in water meetings, and the power that men held in Makondo Parish:

> *The few women who can state their views in meetings are those who attend various trainings and sensitisations or development-related workshops in our Parish, and those who are actively involved in women's associations. The women who do not attend these workshops and those who are not members of associations, such as housewives* [the majority in Makondo Parish] *are usually very quiet in the water meetings and cannot air out their views freely.*
>
> (Male Village Key Informant)

Certainly, observations in the community meetings held in the four case study villages revealed that fewer women contributed to the discussions. A number of women were silent during the meetings, and some who perhaps had important issues that should have been considered were seen murmuring among themselves. It was also observed that most of the women who tried to express themselves held more socially recognisable positions in the villages, and included 'elders' (50 years and above), those involved in businesses such as shop attendants or owners, a nurse and those who were members in women's village or community-based associations.

These results corroborate with a great deal of previous studies on water governance in developing communities, which found that men and women's freedom to exercise voice differed, and that women had little influence in public or community decision-making over water schemes due to various gender biases. For instance, whereas some community members and Key Informants alleged that women freely expressed their opinions in water meetings, men generally had more opportunities to present their views, as earlier observed in water meetings for "improved" water points in rural Uganda (e.g., Ademun 2009; GOU 2009); parts of Africa (e.g., Makoni *et al.* 2004:1294; Franks and Cleaver 2007; Gressier and Ayari 2011); Asia (e.g., Devasia 1998; Meinzen-Dick and Zwarteveen 1998; GWA 2006; Singh 2008; Dey and Ali 2010), and South America (e.g., Zwarteveen *et al.* 2010). Franks and Cleaver's study in the Kimani catchment of south-western Tanzania in particular also highlighted the importance of class or livelihoods, as women from the less socially dominant farming groups and those from poorer households had completely no say in the formal water user groups and irrigation associations. However, in this case the technology used was an upstream offtake for the domestic water supply and an irrigation-based downstream weir, not hand pumps or a protected spring as in Makondo.

This study shows that women's efforts to resist men's power, freedoms and privileges through raising their practical water needs and concerns, such as child fights and restricting their children's physical access to water even after paying repair fees [42] (as opposed to men's preoccupation with simply repair fees) were not realised in local water spaces in Makondo Parish. Whereas these exact concerns are not commonly reported in literature, other studies in Uganda

[42] Both of which were discussed as factors that affected women and children's in water collection and their overall access to water in Chapters Six and Five respectively

(Nimanya *et al.* 2011:16), rural Thailand (Resurrection et. al 2004), and Ethiopia (Ebato and van Koppen 2005) have also suggested that women's opinions and interests were ignored in water meetings. In fact, in the latter case, women's crucial submissions were considered 'negligible', an observation which accords with men's trivialising of women's views in water meetings in Makondo Parish. More vitally, this study has demonstrated that patriarchal norms and beliefs limit women's ability to voice their concerns in water meetings, as men have more power and women are 'expected' to be silent. Women's inability to talk in the presence of their husbands, a patriarchal norm also observed in Makondo perhaps supports previous research in rural India, where women were not allowed to speak in front of men who were not members of their family (Prokopy 2004:111) and young married women[43] of a lower caste were expected to keep a low profile in public gatherings (Singh 2008:936). Fortunately, in Makondo Parish, women of advanced age had higher status than younger women, and they attempted to make their concerns known in water meetings. In addition, this study's findings on women who were members of local village associations being able to voice their concerns or speak in water meetings seem to be consistent with the ideas of Beard and Cartmill (2007) and Cleaver and Hamada (2010), who suggested that the presence of social networks, 'farming groups' or other collective action groups with various political, economic or social aims can increase women's participation in water governance. Similarly, Franks and Cleaver observed that people in village associations such as women or youth groups that engage in 'collective labour' or exercise law and order in loose association with village councils respectively are more able to articulate in public meetings about water allocation (2007:300). However, women's shyness in water meetings as reported in Makondo has not been observed in prior studies.

The findings on dissimilarities in men and women's water needs and interests in water meetings in Makondo Parish, which are key elements of participatory processes as noted in Chapter Two, have not been reported in many studies. Men were keener on simply collecting or contributing repair fees, or the 'monetary' aspect perhaps because of their responsibility of 'provisioning' in their households, yet many of them were unwilling or even never paid the fees anyway, a fact that is consistent with earlier work in rural South Africa (Castresana 2004). On the other hand, women, given their roles and subject position, thought of the more practical aspects discussed

[43] Also women of lower castes in general, e.g., dalit communities (Kulkarni 2011:67)

earlier. One of these is promptness of the pump repairs so as to minimise the likely burden of having to walk to far-off water sources to collect 'safe' water, a finding that supports previous research on water use in rural Zimbabwe, where women (unlike men), also stressed reduced distances and reduction of their work load alongside improved access to water as key benefits (Makoni *et al.* 2004:1294). Also, women's water needs included cleanliness of the water sources; the lack of water vessels, mainly jerry cans; domestic rain-water harvesting technologies such as small drums; and water treatment, for example firewood for cooking drinking water in their households.

7.7 Conclusion

In this Chapter, I have analysed the gender differences in participation in water governance in Makondo Parish, exploring the transformative potential of water management institutions, processes and practices. Regarding representation in local water governance, we have seen that most of the key local level water actors – Village Chairpersons, WUC members, HPM, SHA and DWO are the more privileged men, with the exception of the MMM's, an NGO that is founded and managed by women. We have seen that, in line with Foucault (1980) and Gaventa (2004a), these actors use their power, positions and roles to determine and affect the participation of women and men in local water governance institutions. I have argued that the actions and reputations of the water point service providers for example influence men and women's inclusive representation in less known political processes such as pre-construction and choice of water technologies, with men, for example, not attending meetings convened by government actors who do not meet their income-related expectations. Men are more represented in actual construction activities due to cultural norms and stereotypes that privilege them due to their more 'energetic' abilities compared to women.

Despite the fact that almost every "improved" water point in Makondo Parish has a WUC, the committees are largely inactive. Women occupy few positions (including the 'key' ones) on the committees, yet they are more knowledgeable, enthusiastic and altruistic about participating in the governance of local water institutions. WUC meetings do not occur regularly and although women physically attend these meetings more than men, their voices are rarely heard and their interests tend to be ignored. This in essence resonates with Andrea Cornwall's idea that

representation does not guarantee voice. What we clearly see here is Foucault's disciplinary or 'normalising' power, in which for example local water policies attempt to give women power through representation and voice in WUCs but this power is challenged by patriarchal beliefs and norms. Women's silence in water meetings, shyness and submissiveness are also Foucauldian acts of 'consciousness' that further subjugate them and privilege men or reproduce men's domination (e.g., Kerfoot and Knights 1994, Connell 2005). And, apart from a few occasions in which women tried to resist the patriarchal norms, such as the election of WUC members, replacing an under-performing WUC member, and fencing of a water source, there is limited evidence of women's water choices being respected and implemented in the male-dominated water spaces. Following from theorists such as White (1996), Panda (2007), and Cornwall (2003, 2008), gender-transformative and sustainable water governance can only occur when women effectively participate in all the political processes of decision-making and when they have a voice, yet this is not the case in Makondo Parish. The next Chapter summarises the major findings of this study, its subject and theoretical contributions and makes suggestions for further research.

Chapter Eight: Conclusion

8.1 Introduction

In this Chapter, I outline the major findings and conclusions of this study, following the major themes that were addressed. I explicate the gender dimensions of access to water, water collection and participation in water governance in Makondo Parish. I contend that the social structures and institutions in Makondo Parish do not provide sufficient spaces for more transformative participation in local water governance, especially for women. I then conclude by noting some implications of the study.

8.2 Gender Determinants of Access to Water: Contributions of the Study

This study has illustrated that access to water in Makondo Parish is multifaceted and gendered, and that children and women are most vulnerable.

On the subject of the structural and relational mechanisms of access to water, this study has shown that technologies, particularly advanced tools, do not necessarily increase access to water by poor men and women in developing communities. The presence of "improved" water sources as the more 'safe' sources does not guarantee their preferred use. Women and children, the water fetchers, can use traditional or "unimproved" water sources more if: the "improved" sources do not constantly provide them with water (e.g., when they break down too often and cannot be repaired in time due to governance-related factors discussed in Chapters Five and Seven); "unimproved" water sources are closer to their households; they perceive the palatability of the water from 'unimproved' sources to be better. This is also affected by geogenic factors such as poor siting, mineralisation and seasonal changes in the ground water table or recharge. Thus, the quality of water may not matter much to women and children; it is how reliable a water source is that matters to them, hence determining their ability to 'benefit' from water or have it in their households. This study has provided noteworthy evidence on how roads, another technology, affect access to water. Hilly or bushy roads, and roads used by vehicles increase children and women's burden of fetching water by hand or head loading, and the risks of injury or death, respectively.

This study has also demonstrated that whereas formal water institutions, especially WUCs, are on their own essential determinants of access to water, their influence at micro-levels depends on the degree of authority they have, their relationship with other more powerful institutions and their gender. For example, WUCs cannot achieve much without the help of the more highly regarded Village Chairpersons given the relationships the latter have with the HPMs, who ultimately repair the water sources. Whereas the positions of HPMs and Village Chairpersons are male-dominated as illustrated in Chapter Five, WUCs that have more women members tend to be more active due to women's better interest and mobilisation skills compared to men, as discussed in Chapter Seven. It also appears that individuals in these local institutions, especially Village Chairpersons who are usually contacted first in case of any development in any community are more knowledgeable and have better access to knowledge on most issues including water, hence, in a way influencing access. It is interesting to note that with reference to payments and in-kind contributions, this research has shown that some women can source money from their own little savings to pay for the repair of pumps without relying on their husbands. Nevertheless, whereas the fees set by WUCs and their affordability is debatable, men's failure to pay repair fees denies the more vulnerable women and children physical access to "improved" water sources. This study has shown that there are distinct gender disparities in the performance of direct, indirect and ancillary labour in rural communities, and that these differ according to the water technologies in question. For example, labour needed for "unimproved" water sources is less regular compared to the "improved" sources, although due to gendered stereotypes, men are more actively involved in the more vigorous direct activities such as desilting, with women providing 'lighter' work, such as picking rubbish.

On social identities, it is clear from this study that access to water (and participation in water governance) is gendered, or affects women and men differently as groups, as demonstrated in Chapters Five, Six and Seven. But gender was not the only identity that influenced access to water; social position, age and wealth were as important. For example, we saw that individuals in leadership and technical positions at village, Sub County and District levels, many of whom were the more privileged males used their power and authority to shape access to water in Makondo Parish. Auspiciously, age and social status combined were also key, as the elderly, widows, orphaned children and the very poor were exempted from paying repair fees as more of a locally

understood entitlement or ‘rights-based’ mechanism of access; they also benefited from RWH technologies and water collection equipment provided by the local NGO. The same applied to social ties, where for example the friendship between Village Chairpersons, WUCs and HPMs determines women and children’s access to water and perhaps the burden these groups face in fetching water, yet it has not been mentioned in most literature on water governance in developing communities.

Rights-based mechanisms, particularly the legal modes, allowed some individuals access to water simply because of their identity, as noted earlier in this section. However, entitlements to “improved” water sources are not automatic, as some poor women who do not pay O&M or repair fees are denied physical access to these water technologies, while the practices of the mostly male landlords also restrict women’s access to the water technologies, yet these practices seem to be missing from most literature. I have also shown that stealth behaviour and deception is used by men to gain access to water, as they by-pass paying repair fees for pumps courtesy of the good relations they cultivate with Village Chairpersons, Source Caretakers and Chairpersons of WUCs, the controllers of access.

With regard to water collection, this study has again confirmed that both children and women are burdened by this activity in rural developing communities. I have demonstrated that whereas distance and time (the notable determinants of water collection in most development literature), remain important in understanding the burden of collecting water, there are other complex socio-cultural, environmental and health-related conditions that exacerbate the troubles that children and women face while fetching water. For example, whereas water collection remains a task of both women and children, the latter seem to fetch water more times than the former, at least in Makondo Parish. In contrast to many earlier studies that have shown that girls collect water more, both male and female children are heavily involved in water collection. However, in the age category 18-24, girls are more involved than boys in water collection. This study has also uncovered some social determinants of women’s involvement in water collection that have not been documented in most of the earlier studies. As revealed in Chapter Seven, whereas women still collect water, their physical involvement depends on social conditions such as the availability of children (biological or not) under their care in their households and the ‘stage’ of

their marital relationship, whether they are permanently married or cohabiting. Women who live in households with children of a locally understood water collecting age (mostly 5-18), and those in early stage relationships with partners or husbands who buy water for example, are less involved in water collection. I have also demonstrated that traditional patriarchal norms and stereotypes limit men's involvement in fetching water, and that men only collect water for income, commercial and work-related reasons, or whenever long droughts strike. Women's labelling of men who fetched water daily as mentally unstable or 'mad' was interesting and shows that women sub-consciously reinforce the responsibility of collecting water on themselves.

Concerning distance to water sources, I have shown that children and women, the primary water fetchers, walk distances ranging from less than half a kilometre to more than two kilometres. Whereas similar or even greater distances are covered in rural developing communities, factors such as rugged and hilly roads and paths used by the water fetchers; functionality of existing "improved" water sources and the existence of what the Makondo Parish communities described as 'more reliable' "unimproved" or open water sources were equally important. More still, this study has provided a more in-depth dimension to understanding the 'time burden' that children and women face in collecting water in rural developing communities. Unlike earlier studies that have tended to generalise the total time women and children spend fetching water, this study examined the time and number of trips made by women, men and children to water sources. The study has revealed that time spent per trip to a water source differs by gender, as men and some male children/youths use technologies such as bicycles (and wheelbarrows), hence spending less time per trip, compared to women, children and female youths who spend 30 minutes or more. I have also shown that the number of trips made to a water source matters, and that the highest number of trips (4-5 per day to be more exact) is made by girl children. Women and children also spend a lot of time queuing at "improved" water sources, especially during peak collection periods such as early in the morning and late evenings. Very little has been done on queues as determinants of other risks that children face while collecting water, such as injury due to unwanted fights and verbal abuse. The dangers of physical, emotional and psychological torture due to assault in the form of rape or threats of rape at both "improved" and "unimproved" water points have also been highlighted in this study. Not much has been written on such types of distress faced by children and women as water fetchers in rural developing communities.

This study has also revealed that there could be health risks associated with fetching water. Women and female youths, who carry water by hand or on their heads most of the time unlike men and male children/youths who use bicycles or wheelbarrows, are most affected. The former suffer from health complications such as prolonged fatigue, chest pain and headache, and these have been largely overlooked in most literature on water collection. Another key issue here is the death of children through drowning, and accidental injuries due to drawing water from "unimproved" water sources, which are also largely under-reported in literature on access to water and water collection. They also underline the importance of having "improved" water sources in rural communities so as to minimise injuries and also save the lives of innocent children.

In the above discussions, I have shown that women and children are most affected by the discursive and gendered socio-cultural, environmental and health processes and conditions that complicate access to water. The next section examines the contributions of this study to participation in water governance.

8.3 Participation in Local Water Governance: Contributions of the Study

This study has analysed the gender differences in participation in local water governance, covered under two key typologies premised on bringing about more equitable institutional and social relational changes: representation, and transformation.

With regard to representation, I have argued that despite women's recognised responsibility in provision and management of water at household level, they are under-represented in the governance of water resources in Makondo Parish. I have shown that unlike earlier generic or gender-blind studies, gender differences occur in three major political processes that determine participation in the management of "improved" water resources: pre-construction, construction and post-construction (or O&M). First, I have pointed out that women and men's attendance of pre-construction activities depends on the procedures, conduct and reputation of the service providers in the community. NGOs attract larger numbers of men due to their better reputation and their ability to facilitate them, while women endeavour to participate in all activities

regardless of the service provider, but are sometimes less likely to attend government-led pre-construction activities. This study has also found out that perceived benefits, such as financial gains in form of lunch or transport allowance provided by NGO actors are a key determinant of men's participation in WUC meetings. Most of the previous research on water has not described this factor, although it has been observed in other natural resource management sectors such as forestry (e.g., Agarwal 2001; Prokopy 2005; Nuggehalli and Prokopy 2009).

Secondly, I have illustrated that Makondo Parish has WUCs for most of its "improved" water sources, albeit women are more unaware about these committees. Due to the patriarchal culture, men dominate most of the positions on WUCs, including key positions, contrary to local policies that advocate for an equal number of men and women on the committees, with women occupying at least one key position. I have shown that having more women occupying key positions could increase the effectiveness of a WUC and thereby bring about better access to water for the communities and perhaps better management of "improved" water sources. Also, community knowledge about WUCs, a key and under-researched aspect in bringing about better governance of local water sources is low, but women are slightly more knowledgeable about positions on the committees and their required composition by gender. This perhaps provides women with an opportunity to demand their right to be involved in the institutions that govern their water sources.

This study has also revealed the recursive barriers to women's representation on WUCs. I have demonstrated that these barriers depend on the nature and requirements of the water technology used by the communities. The protected spring rarely broke down and yet break-downs were the major precursor that caused communities to convene meetings. Because the protected spring required cleaning and de-silting, a task that was mainly performed by men (because of their perceived physical strength compared to women) and only about twice a year, the process was used to rather undemocratically elect WUC members, culminating in the higher percentage of men on the committee. Men's physical strength and stereotypical reasons such as their 'toughness' affected women's effective inclusion and representation on WUCs. Also, women's shyness and norms that reinforced men's power during water meetings (and as household heads) while promoting the former's submissiveness also affected their ability to voice their concerns in

water meetings. There is limited literature that associates such social or patriarchal beliefs and norms with women's participation in rural water governance.

8.4 Contributions of the Study to Theory

8.4.1 Access to Water

This study has to a large extent revealed that access to water, a critical resource in rural developing communities, is complex and agonistic and that the power to benefit from water resources is 'everywhere' as advanced by Foucault (1978). It is everywhere in the sense that access to water, or individuals' bundles of power are determined by a range of social or relational and rights-based factors as proposed by Ribot and Peluso (2003) with regard to natural resources. The study has also contributed to the theorisations made on access to water in particular, as advanced by theorists such as Crow (2001); Coles and Wallace (2005); Franks and Cleaver (2007); and Cleaver and Hamada (2010). More importantly, the study has demonstrated the 'gendered powers' and the importance of Foucauldian notions of docile bodies, self discipline and resistance; patriarchy and patriarchal privileging (e.g., Walby 1990 and Connell 2005) in the mechanisms and processes that shape access to water in the context of developing communities in Africa. I explain some of these below.

The social institutions or mechanisms that clearly determined access to water in Makondo included water technologies; formal institutions (and authority); knowledge and information; payments/In-kind contributions; labour, which manifested more in children and women's role in water collection due to exploitation of their labour as the less privileged and their subsequent submissiveness, docility and resistance in this regard; social identities; and social relations. Other social theorists on access to water (e.g., Moriarty 2004; Franks and Cleaver 2007) have suggested technology, transport, distance and money or operation and maintenance costs as key factors that determine access to water, but they seem to be less unequivocal on the patriarchal culture and the gender dynamics within each of these modes of access to water. On the issue of technologies for example, Crow (2001) and Ribot and Peluso (2003) have argued that whether advanced or basic, the technologies can 'facilitate ability to reach a resource', which is not entirely accurate, as "improved" water sources were found to be 'unreliable', time-consuming as they sometimes prolonged women and children's ability to draw water through queues and also

required more physical energy to obtain water from them, as discussed in Chapter Six. In this case, water technologies acted to delay, instead of facilitating access to water.

Furthermore, the findings of this study regarding the role of institutions in determining access to water in Makondo Parish confirm Ribot and Peluso's (2003) thesis of access to resources being shaped by individuals with authority, combined in this case with other bundles of power, such as money[44] and social relations of friendship, identities (family) and status. The relationships between the otherwise active village leaders in Makondo Parish and HPMs or WUCs could be an example of 'investment in relations' confirmed by Berry (1989) and the use of 'capital' in the form of finances (Ribot and Peluso 2003:165). The village leaders also acted due their responsibility (or 'obligation' as noted by the same theorists, 172) to maintain women and children's access to improved water technologies. Also, this study's findings on in-kind payments or provision of communal labour for water are in line with Coles and Wallace's classifications of direct, indirect and ancillary labour, which are largely missing from the theories of Ribot and Peluso and Franks and Cleaver. I have highlighted the fact that the three forms of labour are highly gendered or 'gender stereotypical', with men dominating direct labour and women participating in indirect and ancillary work.

I have also shown that particular social modes of access to water are inseparable. For example, WUCs, Village Chairpersons and HPMs, all male-dominated, can altogether shape access to water for poor men, women and children depending on how well they relate or coordinate their work, discussed above. Also, water technologies and payments, or repair and maintenance fees go hand in hand, depending on the maintenance requirements of a technology and willingness of water users, especially the more financially privileged men to pay. The ability of some women to pay the repair and maintenance fees when men fail to pay could be viewed as an act of resistance, as they struggle to free themselves of hegemonic male control of money or what Amigal and Pujal (2009) described as impediments and innumerable sufferings that they face in accessing water. Formal institutions and authority are also inseparable, as was the case with Village Chairpersons versus WUCs. The relationship between the Village Chairpersons in Makondo Parish, HPMs and WUCs is an example of 'investment in relations' (e.g., Berry 1989);

[44] payment of O&M or repair fees by the water users or repairs that were timely

while payments of repair fees could be a form of 'capital' or finances highlighted by Ribot and Peluso (2003:165).

On the rights-based modes of access, this study has acknowledged that socially accepted circumstances, particularly customary entitlement practices as theorised by Ribot and Peluso confer access to water resources. An interesting finding here was that locally understood practices in Makondo Parish depended on the water technology. For example, there was almost universal or 'free' access to "unimproved" sources regardless of one's gender or status, yet access to "improved" sources was sometimes restricted for children and women from households that defaulted on repair fees. Also, whereas this study has established that "improved" water technologies confer new property rights to the more privileged male owners of land as earlier noted by Crow and Sultana (2002), it has highlighted the distinctive fact that local land rights are more dispersed, intermingling with other modes of access, such as formal institutions, power, social relations and payments or community contributions to influence women and children's access to "improved" water resources. As for the illegal modes of access, another form of stealth behaviour came into sight, which I have called 'direct physical theft', that is the stealing of parts of the water pumps, which was allegedly done by male members of the community who wanted to make financial gains from selling the parts.

8.4.2 Participation in Local Water Governance

Foremost, this study has shown that participation in the governance of rural water resources is indeed gender-specific, as echoed by theorists such as Andrea Cornwall, Franks and Cleaver, Nandita Singh, and Cleaver and Hamada, among others discussed in Chapters Two and Three. Power or 'gendered power relations' for that matter are at the centre of water governance, influencing men and women's representation, membership, voice, agency and actions in local water spaces. Whereas theorising power in female-male relations remains problematic, this study has again largely shown that Michel Foucault's ideas of power being ubiquitous or 'everywhere' can be applied to the politics of local water governance. The notion of 'visible' power was clearly vindicated by the recognised authority that the predominantly male Village Chairpersons and members of WUCs held, as well as the HPM. The 'invisible' power of patriarchal ideologies, customs and norms in Makondo Parish was also clear, as it gave men more control, privileges

and opportunities to freely voice their concerns while subduing women in local water spaces. It is this scenario, just like in access and water collection that normalised (e.g., Foucault 1977; Bordo 1989) the gendered social order in Makondo Parish.

This study explored options for more transformative participation in water governance, particularly inclusion, diversity and opportunities to generate debate, or voice as suggested by theorists such as Hickey and Mohan (2004) and Cornwall (2003; 2008); as well as Sarah White's notion of 'ability to get involved in considering options and making decisions collectively'. As observed in Chapter Seven, the major water actors in Makondo Parish were men, with the exception of the MMM's, founded and run by women. The conduct of many of these actors, or their 'interplay of powers' according to Cornwall, especially government actors is akin to White's notions of nominal and instrumental participation. There was 'gendered instrumentalism' portrayed by government actors in almost all the participatory water governance processes before, during and after construction of bore-holes in Makondo, for example through inviting only a few (mostly influential and male) members such as Village Chairpersons and WUC members. Whereas local governments sought to have the commitment of the communities, men, given their lower attendance rates (compared to NGO water projects) saw participation as a 'cost', although the poorer reputation of the government service providers was also a factor. A prominent issue this study has shown, that deserves theoretical recognition, is that involving men and women in participatory water development should consider the entire array of micro political processes that occur before a given water development is introduced, not just the generalised 'major' decision-making processes. These processes include, for example, pre-construction meetings for water sources, or what I would call 'the first and fundamental options'; implementation of the selected options (or construction); and post-construction.

In addition, this study has shown that representation in water committees, a key form of inclusion in water governance (e.g., Singh 2008 and Cleaver and Hamada 2010 as discussed in Chapter Seven) is gendered with men dominating these institutions and subduing women due to patriarchal beliefs and individual factors explained later on. Another notable observation that concurs with Cornwall's assertions is that representation, or the higher physical presence of women in water meetings in this case does not guarantee voice, as men control the agenda. The

latter is a less theorised issue in participatory development, yet it is a covert dimension of power (e.g., Stewart and Taylor 1995). This study has also demonstrated that a higher representation of the disadvantaged women on WUCs translates into more active local water institutions, hence increasing access to water and improving the governance of "improved" water sources. This perhaps vindicates the need for integrating a more 'ecofeminist' approach that recognises women's closeness to water and 'superior' responsibility for its management compared to men, since women's 'higher' representation on WUCs could transform water governance in rural developing communities. Also, there were clear differences in women and men's voices, choices and agency (as arenas in which societal and gender relations can be transformed, see for example Cornwall and Cleaver and Hamada in Chapter Seven) in local water spaces. We have seen that women's opportunities to generate debate, voice their water-related concerns or consider options and make collective decisions as proposed by theorists such as White and Cleaver and Hamada were limited or skewed in favour of men, and that the subsequent actions rarely reflected women's needs and interests.

The findings of this study on the socio-cultural causes of gender differences in participation in local water spaces interestingly support the thoughts of some feminist and gender theorists, as well as the ideas of Michel Foucault, even though some argue that he was 'ambivalent' about gendered power relations (Radtke and Stam 1994:5). Cognisant of the fact that gender is a technology of the body (e.g., Bordo 1989; Deveaux 1994), the patriarchal ideologies and stereotypes that reinforce men's domination of WUC positions, such as males being more 'physically energetic' or having 'strong personalities' and women's traditional responsibility for household water management corroborate with what feminists call identity-related, temperamental or sex role 'patriarchal polities' (e.g., Millet 1977:26). In this case both women, a subordinate or less privileged group and men as a dominant group cherish male personalities of aggression, force and efficacy (e.g., Moser 1993; Kabeer 1994) as being more appropriate for one to become an effective WUC member. Similarly, cultural norms that promoted women's silence and 'dovetailing' actions in water meetings are akin to female personalities of consciousness, docility and 'ineffectuality' and also strongly support Foucault's 'docile bodies' thesis.

The centrality of Foucault's theories of discourse, knowledge, power and resistance, and gender relations as discussed in Chapter Three, Section 3.3 has also been exhibited in women and men's ability to voice their interests in local water meetings. By exercising their 'rights' through electing WUC members; challenging the position of a male WUC member who was misusing his position to earn favours for his family members at a bore-hole; insisting that another "improved" water source be fenced; complaining about child fights at "improved" water sources and restricted access after paying repair fees, women tried to 'resist' the discourses and practices that subordinated them (e.g., Deveaux 1994; Faith 1994; Amigot and Pujal 2009) in water governance in Makondo Parish. Also, women's timid behaviour, reticence and submissiveness in water meetings in the presence of men or male spouses accord with Foucault's *panopticonism*, 'disciplinary power' exercised through its invisibility, or situations of surveillance, prohibition, and constraint, as noted in his seminal works, *Discipline and Punish* and *Power/Knowledge*. This power, according to Foucault produces knowledge whose effects remain invisible to the subject, making the individual an object of knowledge under increasing forms of subjection. For example, taking local water spaces as our 'situation of surveillance' or 'specific conditions or struggles', this study has demonstrated that local norms and stereotypes produce discourses that privilege men and subjugate women, who, as conscious subjects are shy in water meetings, due to men's power. Furthermore, women's silence and perhaps inability to voice their concerns in water meetings under the watchful eye of men is a form disciplinary acquiescence or submissiveness, which again rendered them 'docile'. Such 'gendered actions' noted by non-essentialist theorists such as Bordo (1989), Kerfoot and Knights (1994), Kirkham (1995) and Connell (2005) reproduce men's domination and increase women's levels of subjection in local water spaces. In essence, they are also disciplinary practices in which both women and men act without coercion, with women unable to contest their actions for fear of the consequences of 'non-compliance' (Bartky 1988), hence normalising men's control of power in access and governance of water. As Foucault also argued, societal norms, and not the laws are key elements of power in water governance in Makondo Parish.

Last but not least, the findings of this thesis on the gender and power dynamics in access and participation in water governance show that women seem to be more vulnerable and are less powerful than their male counterparts. We have seen that in almost all the mechanisms of access,

both relational and rights-based, as well as water collection, women and children are most affected by the consequences of inadequate safe water, or even benefit less compared to men. With regard to participation, women are not effectively represented and their physical presence at local water meetings does not warrant voice. Following the theorisations of Young and Mouffe, 'local water' democracy can only be attained if women, who are significantly affected by water problems are included in all local water governance processes and through more effective forms of representation, not just physical presence in meetings. Women also ought to have their voices and interests included in all discussions and decisions in local water governance, which, unfortunately is not happening in Makondo Parish. All this implies that the pathways and opportunities for more transformative water governance that can change the 'water lives' of both women, men, and male and female youths and children in Makondo are limited.

8.5 Further Research

Whereas this study endeavoured to analyse many of the gendered issues in access and participation in water governance, it was not possible to investigate a number of other important topics due to limitations of resources, time and scope. The issues that deserve more work are discussed below under three key thematic areas of access, collection and participation.

8.5.1 On Access to Water

Whereas this study addressed both the social/relational and rights-based modes of access to water, more attention was perhaps given to the 'formal' institutions influencing men and women's access to water, or local water actors such as Village Chairpersons and WUCs, and "improved" water technologies, which are also largely 'formal'. Future investigations on the gendered politics of traditional or "unimproved" water technologies and informal institutions, such as local associations, cultural or socially embedded entitlements, family or kinship relations amongst various tribes and farming groups such as pastoralists, a minority in Makondo might illuminate other ways through which men and women access water in developing communities. Earlier studies have for example indicated that due to their lifestyle, pastoralists have dissimilar gender relations compared to other farming communities in Uganda (e.g., Asaba 2007). Another key issue that was not keenly investigated in this study was that of the 'personal' politics of water, or domestic/household water use and management. This, according to Franks and Cleaver

(2007:296), is a key domain of water governance outcomes or 'basic access' in terms of quantity, quality and timing of water availability, and thus a major determinant of household water security. A study that takes into account variables such as water amounts used, decision-making on water allocation for different uses and performance of water-related tasks (such as storage, treatment, and watering of animals) from a gender perspective could establish how men, women and children negotiate water benefits at household level.

8.5.2 On Water Collection

Just like access to water, this study has examined the major processes and conditions that characterise water collection, but limited evidence was gathered on a number of other social issues that influence this activity. One of these is the distances that women and children walked to the different water sources –"improved" versus "unimproved" sources in the entire Parish. More research on proximity between the different water technologies and households is needed, perhaps using GIS maps, as these distances may for example vary by technology and village and lead to different vulnerabilities and impacts on women and children. Concerning the time burden, we have seen that men spend a shorter time fetching water than women and children. This matter requires further investigations – is it simply that men have access technologies to transport water? Would providing women and female children and youths with these technologies reduce the time they spend fetching water? Also, children and women take longer to pump water at shallow wells and bore-holes. If attention to physical effort required was embedded in the type and design of the water technologies themselves, would it improve the ability of children and women to draw water?

This brings us to the question of the health effects of carrying water. Although this study has uncovered ailments such as chest pain, fatigue, headache and nasal bleeding and injuries or deaths due to drowning, further work is required to establish the extent and impact of these often unreported threats to the health of women and children, which are not just medical but are also social and psychological. The same approach could be applied for assault from humans (especially rape) and animals, as well as verbal abuse at water sources. Fights that occur at "improved" water sources, especially among children due to queuing or jumping queues are important issues for future research. It would be worthwhile to establish whether these fights occur between adults and children or adults themselves, why, which gender is most affected and

how. This brings us to the issue of the links between water collection and gender-based violence. FGDs and some Key Informants seemed to point out that there were many cases of domestic violence related to water scarcity or unavailability, for example when men demand for water for bathing and it is not available, or even the contentious issue of men using the limited water available for watering their animals. These concerns were also highlighted in the previous sub-section but were perhaps beyond this study. The impact of water collection on child education, especially the girl child is also an important issue for further research. It might be interesting to investigate, at a household level, how fetching water at different times of the day and seasons affects children's school attendance. How much time is lost when children should be in school?

8.5.3 On Participation in Local Water Governance

On participation, I have explored the processes of inclusion, debating or negotiation and voice and how these processes empower women and men. With regard to the actors, this study, by design, focussed on the gender differences among micro and meso-level agents in water governance. It did not take into account the key macro-level actors who are equally critical at a national level, particularly for policy implementation in rural areas such as Makondo Parish. On representation, this study has revealed that WUCs with more women tend to be more active than the male-dominated ones in terms of better access to water and functionality of "improved" water sources. But this was perhaps based on a smaller sample of about two 'model' female-dominated WUCs in Makondo Parish. Further work on the performance of WUCs with more female representatives in other rural areas in Uganda or other parts of the developing world is required so as to better comprehend why and how women's higher membership could improve governance of water at micro levels.

However, the study again engaged more with the formal processes of water governance for "improved" water sources. Thus, just like access to water discussed above, a further study on other less formal arrangements, processes or even 'uninvited spaces' such as management of "unimproved" water sources, village-based gatherings, identity groupings and other less direct communal norms or practices and how they influence men and women's inclusion in water governance could be a worthwhile effort. As we saw in Chapter Seven for example, women's involvement in associational groups and in other non-water related spaces influenced their

participation in water governance, while, as pointed out by Nandita Singh, community-based institutional frameworks may differ in how they 'gender' participation in water governance, and these are all issues that need to be understood more clearly.

8.6 Implications of the Study

In this section, I outline a few context-specific implications of this study, particularly on more inclusive, gender equitable and sustainable water governance in rural communities. First, it is clear that on the whole, women remain the managers of water at household level but their participation in local water governance is limited by institutional and gendered cultural norms. Men tend to have more power in local water spaces as they occupy all the key positions at Village, Sub County and District levels (as described in the national water policies) and do little to ensure that water resources remain functional and that women's views and interests are represented. This means that the national framework regarding gender equality in the context of water structures at Village, Sub County and District levels is simply inadequate as it does not effectively challenge men's domination of powerful positions and their disinterest in enhancing the functionality of improved water sources and water structures. Perhaps a rights-based approach bent on emphasizing the equal representation of women and men in the powerful positions in local water governance as stipulated in the NWP and NFOMRWS is needed in Makondo Parish and all rural communities in Uganda. More specifically, the implications are again categorised into two, following the major themes of this study.

8.6.1 Implications for Access to Water

Many of the key water actors seem to be ignorant of the need to involve women in the relevant institutional set-ups and processes for water governance. For example, the local or 'civil' individuals, especially men, are not well aware of the relevance of mechanisms such as financial contributions towards repair or O&M of water sources**.** These 'economics of access' are very crucial in ensuring men and women's access to "improved" water sources, and indeed improving the functionality of these water technologies. Men, who earn more and have better access to money than women do not want to pay repair fees. This increases the burden on women and children who then use "unimproved" water sources and travel longer distances to functioning water sources. There is also a need to consider the synergies in water-related roles between

WUCs and Village Chairpersons under the community-based management system in Makondo Parish and indeed most parts of rural Uganda. We have seen that the two seem to rely so much on each other, and this might require a shift in emphasis of local-level institutions by recognising the role that Village Chairpersons play in improving women and children's access to water, and not just the automatic policy provision that they are members or *ex-officios* of WUCs. Approaches that seek to tap the knowledge and authority of Village Chairpersons and improve their relations with WUCs could lead to better access to water in rural communities. For example, women can be better empowered by making it mandatory for all Deputy Village or LC1 Chairpersons to be women and all the LC1 Committees to have 50 percent female composition as is now the case with WUCs (unlike the 30% set by the Local Government Act, 1997).

More emphasis also needs to be put on the entire process of water collection, and not just distances to water sources and amounts or quality of water collected. Encouraging men for example to give a hand in fetching water could reduce women and children's heavy work-load. There were some signs that the FGDs and community meetings conducted in this study, together with some of the health-related sensitisation workshops conducted by WIL, triggered minor changes in water-related roles, with men now more willing to change. It was also observed that sensitisation and training by government and some NGOs gave women (especially the older and young ones) more self-belief and ability to voice their concerns in water meetings. Intensifying such trainings can also encourage women to take up powerful positions and lead to more gender balanced participation in local water governance, as elaborated in the next sub-section.

Improvements are also needed in the design and functionality of hand pumps to make them more usable by women and children, reliable, time-saving and easier to maintain by the resource poor communities in Makondo Parish. Training children and women on how to use the pumps is also important here, as the former were mainly responsible for damaging the pumps and the subsequent break-downs.

Furthermore, the need to create a local 'social' atmosphere that reduces the burdens and risks that children and women face when walking to water sources, such as rugged roads, likelihood of injury or drowning at "unimproved" water sources, and threats of rape is crucial. The risks of

injury could for example be reduced by encouraging the fencing of open wells and ponds. Restricting the times of collecting water and instituting measures that protect women and children (perhaps through the Village Chairpersons, Water User Committee members, Caretakers of water sources and the water users themselves among others) may reduce on the threats of rape. It is important that Village Chairpersons take the threats of rape in their areas seriously since they are mandated by the Local Government Act and NFOMRWS to supervise all developments (including water) in their villages and to also make by-laws. They should for example work with WUCs, higher local governments and the police to formulate stringent by-laws on rape and protection of women and children during water collection and anywhere in the community. Also, standardising the weight or litres of water vessels that male and female water fetchers of different ages should carry and incorporating it into local water by-laws (and policies at higher levels) may also reduce on the health risks faced by women and children as a result of carrying heavy water loads.

8.6.2 Implications on Gender Equitable Participation in Water Governance

Again, a great deal of sensitisation and training is needed in Makondo Parish and indeed most parts of rural Uganda so as to overcome the normalising patriarchal beliefs, norms and stereotypes that promote men's superiority at household and community or collective water management levels. Both men and women should be targeted, including the mostly male Village and WUC Chairpersons who can be champions of women's empowerment at the local level. This training should address issues such as the benefits of both groups participating in all water-related spaces, their abilities and the contributions that women in particular can make if they take up key positions in overall water governance. For the sensitisation to be effective, the government, through MGLSD and MWE (the lead agencies responsible for gender equality and management of water resources respectively), together with NGOs, local authorities and other partners, should actively work together to promote gender equality and women's empowerment in access to water and its governance at local levels. As has been observed in most parts of the developing world, changing the gendered cultural norms and stereotypes requires a great deal of patience.

Women's representation in formal institutions at village, Sub County, District and perhaps national levels is low and needs to be strengthened. The main institutions here in the context of Makondo Parish include WUCs, Village Chairpersons (village level); SHAs, CDOs and HPMs (Sub-County level); and the DWO and District CDO at the District level. These institutions are crucial to the sustainable management of safe water resources but are unfortunately dominated by men, yet the main household water managers are women, who, together with children are also responsible for fetching water. At the micro level, women's presence in key positions of local power such as Village Chairpersons, Village Local Council Committees and WUCs should be made mandatory, with 50 percent representation as stipulated in the Water Statute and the National Water Policy in the case of the latter. Having more women in such influential positions not only reduces institutional barriers to their representation and participation in local water governance, but also increases the functionality of "improved" water sources and payment of repair fees as partly demonstrated by this study. Payment of O&M or repair fees may hinge on women's ability to mobilise male water users and household heads in general, as has been tested in other parts of Africa such as Malawi (Maharaj *et al.* 1999). Thus, women should be encouraged to take up key roles in decision-making, particularly key positions on WUCs such as Chairpersons, Vice Chairpersons, Secretaries, Treasurers and Caretakers, who influence physical access to water points. Having more women Caretakers in the community could for example help in changing local stereotypes that prevent women from repairing or 'touching' hand pumps. Training WUCs and Village Chairpersons and reminding them of their roles and the contributions women can make is essential here, since WUCs can be dormant without the assistance of the more authoritative Village Chairpersons. At a broader level, breaking through gender stereotyping may require training more women as water professionals – engineers and social scientists alike - so that they can take up various technical positions at national, District and Sub County levels. The need for capacity building and regular training of all the key water actors (including the most active NGOs such as the MMM's that prioritise issues of health and water that are women's domains) on ensuring gender sensitivity in all processes of safe water provision and delivery in rural communities, from pre-construction to post construction or repair and maintenance is also very critical in improving the governance of "improved" water sources.

Lastly but not least, making local water spaces more democratic, deliberative and gender-inclusive by enabling men, women, youths and children's (girls and boys) more active representation and involvement in all processes or activities may be valuable. In order to deepen democracy in local water governance, women should be better represented among all the key actors at village, Sub County and District levels regardless of their age, education and socio-economic status. These mainly formal key actors should also be encouraged to prioritise and support the inclusion of poor women and men in pre-construction, construction and post-construction meetings and to ensure that women are allowed to deliberate on water issues and also voice their concerns in these spaces. Increasing women's representation among the key actors and their higher involvement and voice in meetings could reduce the impact of cultural norms and stereotypes that undermine women's enthusiasm, confidence and self-belief in water gatherings. Some patience and continued persuasion of both men and women (through, for example, trainings) about the significance of considering women's knowledge and needs is also required here. Evidence from rural developing communities shows that allowing women to participate more actively in water projects empowers them by increasing their confidence, knowledge and public speaking skills (e.g., Prokopy 2004; GWA 2006). Women's confidence and self-belief in WUC meetings can also be enhanced through specific trainings aimed at improving their assertiveness and public debating and communication skills, or what have generally been described as 'new skills' in water management (Wallace and Coles 2005:17). The same social theorists warn that these trainings should not be implemented as a 'quick fix', as they require strategies of ensuring that men 'allow women to participate', although the latter may not be a huge issue in Makondo Parish with regard to attendance of water meetings. All in all, as other water and natural resource management studies have proved, successful efforts to advance gender equality in decision-making on water need to take into account the roles of cultural factors, needs of all groups, women's skills and the 'rules' in place (e.g., Pandolfelli *et al.* 2008:9-10; Villanueva 2011:37; World Bank 2012).

Appendices

Appendix A

SURVEY QUESTIONNAIRE ON GENDER, POWER AND WATER GOVERNANCE IN MAKONDO PARISH, NDAGWE SUBCOUNTY, LWENGO DISTRICT IN UGANDA

Date:……..…….……..….
Time Started:…….……..…….
Time Ended:……..……

A: HOUSEHOLD AND INTERVIEWER IDENTIFICATION

1. Interviewer's Number (Enumerator)

1	4	7
2	5	8
3	6	9

2. Interviewer's Sex

1. Male 2. Female

3. Household Number ☐

4. Name of the village?

1. Misaana	6. Micunda	11. Kibuye
2. Kyamukama	7. Kiyumbakimu	12. Kanyogoga
3. Luyiiyi Kaate	8. Kiguluka	13. Wajjinja
4. Luyiiyi Protazio	9. Kiganjo	14. Kayunga
5. Makondo	10. Kiteredde	15. Kijjajasi

5. Where the household located in relation to the village

1. Within a trading centre
2. Along a road, but not in the trading centre
3. Completely off the Road

6. GPS Number and Reading

Northing ☐

Easting ☐

B: RESPONDENTS CHARACTERISTICS

7. Sex of the respondent

1. Male 2. Female

8. What is your status in the household?

1. Male head of a household
2. Female head in a male headed household
3. Female head of a household
4. Male head of child/orphan headed household
5. Female head of child/ orphan headed household
6. Wife in a male-headed household
7. Male in a female-headed household
8. Male in a male-headed household
9. Other (specify)

9. What level of education (formal) have you attained?

1. None
2. Primary
3. O level
4. A level
5. Dip Holder
6. Degree Holder

10. What is your main occupation?

1. Crop farmer/Peasant
2. House wife
3. Student
4. Salaried Worker
5. Casual Labourer
6. Self –employed
7. Livestock Farmer
8. Mixed Farmer
9. Other (please specify)

11. How many are you in this household?

12. What is your tribe /ethnic background?

1. Muganda
2. Munyarwanda
3. Munyankole
4. Munyoro
5. Murundi
6. Mukiga
7. Other (please specify)

13. Which religious denomination do you belong to?

1. Roman Catholic
2. Protestant
3. Islam
4. Pentecostal
5. Traditional believer
6. Other (please specify)

14. What is your current marital status?

1. Married
2. Cohabiting
3. Widow
4. Widower
5. Divorced/separated
6. Single/ not yet married/ never married

C: HOUSEHOLD LIVELIHOODS & WELL BEING

15. What is your household's major source of income?

1. Remittances
2. Sale of labour
3. Business
4. Salary
5. Mixed Farming
6. Crop Farming
7. Livestock Farming
8. Other (please specify)

16. What is your estimated monthly household income?

1. Less than 10,000 UGX
2. 10,000-50,000 UGX
3. 50,000-100,0000 UGX
4. 100,000-200,000 UGX
5. 200,000-300,000 UGX
6. Above 300,000 UGX

17. What forms of expenditure related to your household water needs has your household incurred in the last one year? (MULTIPLE RESPONSES ALLOWED IF ANSWER IS NOT NONE)

1. None
2. Monthly contribution to operation and maintenance
3. Contribution towards repair of pumps when they breakdowns
4. Purchase of water transport equipment e.g. bikes, wheel barrows etc

5. Purchase of water storage equipment e.g. buckets, pots, jerry cans etc
6. Water treatment
7. Buying water
8. Others (please specify)

18. Please estimate how much money your household spends on water in a month?

1. No expenditure at all
2. Doesn't know/ cannot tell how much is spent
3. 500 UGX or less
4. Between 500-5,000UGX
5. 5,000-10,000 UGX
6. Above 10,000 UGX

19. Type of dwelling unit?

1. Permanent (plastered /unplastered brick wall, cemented floor & iron roof)
2. Semi-permanent (plastered /unplastered mud & wattle with cemented /uncemented floor & iron roof)
3. Temporary (mud and wattle with grass thatch & no cemented floor)
4. Built in permanent materials but no cemented floor

20. How many meals did you have yesterday as a household?

1. One
2. Two
3. Three
4. Four
5. Other (please specify)

21. If less than 3 meals were eaten, why?(MULTIPLE ANSWERS ALLOWED)

1. Lack of enough food
2. Lack of charcoal / firewood
3. Very busy /lack of time
4. Lack of enough money
5. Lack of enough water
6. Other (please specify)

22. Have you ever made a contribution towards any community development initiative in your area?

1. Yes
2. No
3. Doesn't know /can't remember

23. If yes, what contribution did you make?

1. Financial
2. Labour
3. Ideas /meetings
4. Land
5. Local Materials
6. Other (please specify)

24. Towards what development project /initiative/ activity was your contribution (MULTIPLE ANSWERS ALLOWED)

1. Water and sanitation
2. School development project
3. Health promotion (Malaria, HIV/ AIDS etc)
4. Security and safety of life and property
5. Community road/ bridges /culvert
6. Construction of place of worship
7. Other (please specify)

D: ACCESS TO SAFE WATER

25. What is the main source of drinking water for your household?

1. Borehole /deep well
2. Shallow well
3. Protected spring
4. Rain water (in tank/drum/jerry can/other container)
5. Bottled water
6. Unprotected source (open well, stream, river, pond, wetland etc)
7. Other (please specify)

26. Why the above is mentioned the most common source for your drinking water? (MULTIPLE

	Always	Once /twice a week	Once/twice in two –three weeks	Once /twice a month	Three or more times a month	Once /twice or more in a year

RESPONSES ALLOWED. PLEASE TICK UP TO THREE ONLY)

1. Close/ near to the h/hold
2. Permanent and reliable source of water
3. Has good quality of water
4. Meets/provides all the water needs at home
5. No treatment required before drinking
6. No need to pay money in order to use it
7. Other (please specify)

27. Who funded the construction of this water source?

1. Government /District /Sub –county
2. NGO (name ……)
3. Community efforts
4. Individual (Name ……)
5. Don't know
6. Other (please specify)

28. What major problems do you find in using/collecting water from your main source? (MULTIPLE RESPONSES ALLOWED. PLEASE TICK UP TO THREE ONLY)

1. None
2. Too far from the household
3. Road/path is bad
4. Risky for children esp. girls
5. Congestion of users /queues
6. Irregular flow
7. Drying up/not permanent
8. Contamination (e.g. by livestock etc)
9. Maintenance charges
10. Lack of money to buy water/pay maintenance fees
11. Hard/salty water
12. Other(please specify)

29. What alternative sources of water do you use in your household and how often are these used?

1. Only one source of water is used						
2.Borehole						
3.Shallow well						
4. Protected spring						
5. Rain water (in tank/drum/jerry can/other container)						
6.Unprotected source						
7.Others (specify)						

30. What is the purpose of using the alternative water source? (MULTIPLE RESPONSES ALLOWED)

1. Very near home
2. Permanent source of water
3. Can meet all water needs at home
4. Has good quality water
5. Unlimited access (no restrictions)
6. Minimal/no congestion at source
7. Has soft water/water that easily makes froth
8. Other (please specify)

31. How far in kilometers is your main water source from your home?

1. Less than half a kilometre
2. Almost a kilometre
3. Nearly two kilometers
4. More than two kilometers
5. Not sure
6. Other (please specify)

32. How much time does it take the following categories of people in your household to fetch water from your nearest water source?

	Less than 10 mins	**10-30 mins**	**30 mins -1hr**	**1-2 hrs**	**2-3 hrs**	**Above 3 hrs**
1. Adult females	o	o	o	o	o	o
2. Adult males	o	o	o	o	o	o
3. Female children	o	o	o	o	o	o
4. Male children	o	o	o	o	o	o
5. Female youths	o	o	o	o	o	o
6. Male youths	o	o	o	o	o	o
7. Household helps/domestic workers	o	o	o	o	o	o

33. What else would your household do if you took a very short time to collect water from your main water source? (MULTIPLE REPONSES ALLOWED. PLEASE TICK UP TO THREE ONLY)

1. Income generating activities
2. Spend it on leisure activities
3. Spend it on other household activities
4. Children would attend school/education better
5. Resting
6. Nothing
7. Don't know /can't tell
8. Other (please specify)

34. Does your household get water from water vendors?

1. Never at all
2. Yes, sometimes, in wet and dry seasons
3. Yes, only in the dry season
4. Yes, always
5. Yes, when children are at school/away from home

35. What type of containers do you/your household members use to fetch water? (MULTIPLE REPONSES ALLOWED, UP TO TWO)

1. Plastic jerry cans
2. Clay Pots
3. Buckets (plastic /metallic)
4. Other (please specify)

36. Who performs the following water related tasks in your household

	Adult females	Adult males	Female children	Male children	Female youths	Male youths	Labourers/workers/Household helps
1. Water collection/fetching	o	o	o	o	o	o	o
2. Water storage(in tanks, drums, pots etc)	o	o	o	o	o	o	o
3. Water treatment (e.g. boiling drinking water)	o	o	o	o	o	o	o
4. Cleaning house/ toilet /bathrooms	o	o	o	o	o	o	o
5. Washing utensils	o	o	o	o	o	o	o
6. Washing clothes	o	o	o	o	o	o	o
7. Watering crops/plants	o	o	o	o	o	o	o
8. Watering/spraying animals	o	o	o	o	o	o	o
9. Cooking food	o	o	o	o	o	o	o
10. Washing bicycles/motorcycle/cars	o	o	o	o	o	o	o
11. Bathing children	o	o	o	o	o	o	o

37. On average, how many times a day do the following categories of people collect water from your main water source?

	Never/ None	1-2	2-3	3-4	4-5	More than 5
1. Adult females	o	o	o	o	o	o
2. Adult males	o	o	o	o	o	o
3. Female children	o	o	o	o	o	o
4. Male children	o	o	o	o	o	o
5. Female youths	o	o	o	o	o	o
6. Male youths	o	o	o	o	o	o
7. Household helps/domestic workers	o	o	o	o	o	o

38. How many litres of water do the following categories of people collect from the water source per visit?

	Never/ None	1-5	5-10	10-15	15-20	More (specify)
1. Adult females	o	o	o	o	o	
2. Adult males	o	o	o	o	o	
3. Female children	o	o	o	o	o	
4. Male children	o	o	o	o	o	
5. Female youths	o	o	o	o	o	
6. Male youths	o	o	o	o	o	
7. Household helps/domestic workers/labourers/ vendors	o	o	o	o	o	

39. What type of transport is mainly used by the following people in your household to collect water?

	Bicycle	Hand/head lifting	Wheel Barrow	Motor cycle/`'boda boda'	Motor vehicle
1. Adult females	□	□	□	□	□
2. Adult males	□	□	□	□	□
3. Female children	□	□	□	□	□
4. Male children	□	□	□	□	□
5. Female youths	□	□	□	□	□
6. Male youths	□	□	□	□	□
7. Domestic workers /Household helpers	□	□	□	□	□

40. What problems do you face with your method of transporting water to your household? (MULTIPLE ANSWERS ALLOWED, UP TO THREE)

1. No problem at all
2. Tiresome, needs a lot of physical energy
3. It is costly
4. Bad road/terrain to and from source
5. Limited amount of water transported at a time
6. Takes a lot of time when transporting water
7. Other (please specify)

41. What ailments/ health problems have the following members of your household suffered as result of fetching water?

	None	Chest pain	Headache/pains in the head	Nasal bleeding	Chronic fatigue	Back pain	Spinal problems/ deformities	Pelvic pain/ deformities	Others (specify)
1. Adult females									
2. Adult male									
3. Female children									
4. Male children									
5. Female youths									
6. Male youths									
7. Domestic workers /Household									

helps									

42. What qualities would you like to see in a water source in your village/community?

1. Clean water safe for drinking
2. Does not breakdown so often
3. Cheap to maintain
4. No long queues
5. Uses short time to fill container
6. Not far from home
7. Permanent source
8. Not strenuous to operate
9. Not sure
10. Improved water source e.g. shallow well/bore hole
11. Other (please specify)

E: WATER USER PERCEPTIONS OF SAFE WATER SERVICES AND SYSTEMS

43. If you were asked to rank your major household needs, where would you put clean and safe water?

1. Top priority
2. Second priority
3. Medium priority
4. Very low priority
5. No priority

44. If water is second, medium or very low among the priorities, what is the first priority?.....

45. Who do you consider the most important safe water service provider in your parish/community?

1. Government
2. Medical Missionaries of Mary(MMM)
3. The general community
4. Private contractors
5. Can't tell/Not Sure/Don't Know
6. Other NGOs (please name ……..)
7. None
8. Other (please specify)

46. How would you rate the way safe water service delivery programmes in your community involve you in deciding what water service to provide and where they are to be provided?

1. Very Good
2. Fairly good
3. Bad
4. Very bad
5. Can't tell

47. Which reasons best explain your rating of how safe water delivery programmes involve you in deciding water service to provide and where?(MULTIPLE ANSWERS ALLOWED, TICK TWO)

1. Not involved at all
2. Only involve few members of community
3. Involved throughout all planning meetings
4. Our views are considered in all decision making
5. Water user meetings not held/not there
6. Other (please specify)

48. What in your view can be done to improve the way safe water services are delivered in your community? (MULTIPLE ANSWERS ALLOWED, ONLY THREE)

1. Involve community members in service delivery
2. Sensitize water users to make contributions
3. Put up more alternative water sources
4. Undertake repairs of all broken down sources
5. Build capacity of water user committees
6. Eliminate conflicts over water collection/access/use
7. Train and equip local pump mechanics
8. External support
9. Other(please specify)

49. What safe water services does the government provide in your community? (MULTIPLE ANSWERS ALLOWED, ONLY THREE)

1. None
2. Establishing various water sources
3. Regular maintenance and repairs
4. Training and sensitizing water users
5. Monitoring to ensure quality of services
6. Hiring and paying contractors
7. Don't know
8. Others (please specify)

50. What is your rating of the contribution of government to your community's access to safe water services?

1. Adequate 2. Inadequate 3. Can't tell

51. What is your rating of the contributions of your community to safe water service delivery?

1. Adequate 2.Inadequate 3.Doesnot know/can't tell
4. Completely inadequate/they don't care at all 5. Do not have/have never got a safe water source ***(go to question 17)***

52. Which reasons best explain your rating of the contributions of your community to safe water service? (MULTIPLE ANSWERS, ONLY TWO)

1. People don't want to pay maintenance fees
2. People uncooperative/do not attend meetings
3. People pay operations & maintenance fees well
4. People attend meeting
5. People work together
6. People do not have enough money
7. Other (Please specify)

53. As an individual, what contribution (s) have you made towards safe water service delivery in your community in the past one year? (MULTIPLE RESPONSES, ONLY THREE)

1- None ***(go to question 20)***
2- Labour and materials during construction
3- Community mobilization and sensitization on roles
4- Participate in community meetings
5- Member of a water user committee
6- Cash contribution towards capital cost
7-Cash contribution towards operation &maintenance
8- Accommodating the workers
9-Other (please specify)

54. If money was contributed, how much was it in Uganda Shillings?

1. 100 UGX or less
2. Between 1000-3000 UGX
3-Between 3000-5000 UGX
4. Above 5000 UGX
5. Can't remember
6. Doesn't know

55. When was the last time your household made a financial contribution towards the operation, maintenance or repair of your water source?

1- Have never made a financial contribution
2- One month ago
3- Months ago
4- Nearly a year ago
5- More than two years ago
6. Can't tell
7- Others (please specify)

56. Who usually mobilizes you to make a financial contribution to operation, maintenance or repair of your water main source? (MULTIPLE ANSWERS, THREE ONLY)

1- Have never been mobilized
2- Own initiative/voluntary
3-Water user committee
4. Local officials
5. Extension staff
6. NGO/Project staff
7-Local Council 1 committee
8-Other (please specify)

57. Who pays this money in your household? (MULTIPLE ANSWERS ALLOWED, UP TO TWO ONLY)

1-Adult females
2-Adult males
3-Adult males & females
4-Female children
5- Male Children
6-Female & male children
7-Household helps/domestic workers
8- All household members
9-Female youths
10-Male youths
11-Nobody ***(go to question 25)***
12- Don't Know ***(go to question 25)***

58. Why is it that this/these person(s) are the ones who pay? (MULTIPLE ANSWERS, TWO ONLY)

1- Household head
2- Is more available
3- Has the money
4- Is the one responsible for paying
5- Don't know /not sure
6- Other (specify)

F: PARTICIPATION IN COMMUNITY BASED WATER MANAGEMENT

59. Does your improved water source have a water user committee (WUC)?

1. Yes
2. No ***(go to section J)***
3. Don't know
4. Have no borehole/shallow well/protected spring ***(go to section J)***

60. If your water source has a WUC, what are the roles and responsibilities of the committee in your community? (MULTIPLE ANSWERS, THREE ONLY)

1. Collecting money for O&M
2. Cleaning the source
3. Routine maintenance
4. Water source operation
5. Carry out repairs
6. Reporting breakages
7. Calling/Holding meetings
8. Other (please specify)

61. Please mention any one position in the composition of your water user committee

1. Doesn't know/ can't tell ***(go to qn 5)***
2. Chairperson
3. Vice chairperson
4. Secretary
5. Treasurer
6. Care taker
7. Ex-official
8. Other (please specify)

62. What is the current composition of the WUC for your protected water source by gender?

	1. Male	2. Female	3. Can't tell/Doesn't know
1. Chair person			
2. Vice chair person			
3. Secretary			
4. Treasurer			
5. Care taker			
6. Ex-official			
7. Advisor			
8. Information/Public Relations Officer			
9. Other (specify)			

63. What is the percentage of women that ought to constitute your WUC?

1. Don't know /not sure
2. One third (33%)
3. Half (50%)

4. Other (please specify)

64. Who are the majority that compose your WUC?

1. Women
2. Men
3. Don't Know/Not sure

65. How do you rate the performance of your water user committee?

1. Very good
2. Good
3. Fair
4. Poor
5. Can't tell

66. Please give reasons for your rating above (MULTIPLE RESPONSES, UP TO TWO)

1. Regular meetings
2. Transparent
3. Give feed back to community on their deliberations
4. Financially accountable
5. Takes good care of the water source
6. Do not hold meetings
7. Not transparent
8. Do not perform their stipulated roles
9. Do not harass/mistreat/deny fees defaulters access
10. Other (please specify)

67. When did your WUC last meet?

1. The committee has never met
2. Within this month
3. Last month
4. Months ago
5. About a year ago
6. About 2 years ago
7. Can't remember
8. Don't know/Not sure

68. How often does the entire community of water users meet to deliberate on water issues?

1. Never met
2. Once a month
3. Several times a month
4. Once a year
5. Twice or more a year
6. Can't tell/don't know

69. From your observation in these meetings or what you know, who mainly attends these meetings?

1. Both men and women equally
2. Mainly women attend
3. Mainly men attend
4. Can't tell
5. Don't know

70. Why do you think it is the above persons who attend these meetings more?

1. They care most about water in the household
2. They are affected most when water is not available
3. They spend/incur expenses when water-related diseases attack household members
4. Are more educated than women
5. Don't care about water or its availability in the household
6. Spend money on repair and maintenance of water pump/source
7. Men send women/their children to represent them in the meetings
8. Are responsible for attending the meetings
9. Others (specify)

71. What are the major issues discussed whenever these meetings take place? (MULTIPLE ANSWERS ALLOWED)

1. Accountability for funds
2. Payment of contributions
3. Operation&Maintenance
4. Cleanliness and hygiene
5. Safeguarding the water source
6. Conflicts over the use of the water source
7. Other (please specify)

G: HOUSEHOLD CAPACITY BUILDING FOR SUSTAINABLE UTILIZATION OF SAFE WATER IN THE COMMUNITY

80. What kind of sensitization or training on safe water service delivery have you or a member of your household received in the past?(MULTIPLE ANSWERS ALLOWED)

1. None received ***(stop here)***
2. Don't know
3. Forming water user committee
4. Cleaning the water source
5. Undertaking minor repairs
6. Operation of the water source
7. Management of community contributions
8. Setting and enforcement of bye laws
9. Can't remember
10. Other (please specify)

81. If training was received, who trained or sensitized you in the following areas (READ OUT)

	Government official (specify……)	**Local politicians (specify……)**	**NGO/project staff (specify…….....)**	**Don't know /don't remember**
1. Forming water user committee				
2. Cleaning the water source				
3. Undertaking minor repairs				
4. Operation of the water source				
5. Management of cash contributions				
6. Forming& enforcing bye laws				
7. Others (please specify)				

82. When was the last time you were sensitized?

1. Within this month
2. Months ago
3. About a year ago
4. About two years ago
5. Don't know / can't remember
6. Never/has never attended any sensitization/training
7. Others (specify)

83. Who was mainly represented in the last training you attended on safe water service delivery in the community?

1. Both men and women were well represented
2. Men were more represented
3. Women were more represented
4. Don't know/Can't tell

Appendix B

In-depth Interview Guides
Appendix B1: Key Informant Interview Guides

Appendix B1a

Micro Level Key Informant Interview Guide

Section A: Respondents Identification

A1 Age; sex etc
A2 Current position in Village/Parish/Sub County
A3 Major role with regard to access or provision of safe water in Village/Parish/Sub County

---

Section B: Access to Water

B1 Major sources of drinking water for people in village/Parish/Sub County
B2 Who collects/fetches water by gender and reasons; How water is transported, how long it takes to fetch water by gender and reasons
B3 Problems community have in accessing "protected" and "unprotected" water sources; who is most affected by gender - *men, women, male and female youths, boy and girl children*

Section C: Participation and Decision Making Over Protected Water Resources

C1 Major actors in the provision of water sources in village/Parish/Sub County; how community members are involved in establishment of "improved" water sources *(decisions on siting, type of water source etc)*
C2 How community operate and maintain "improved" water sources; roles by gender and how? Who pays operation and maintenance fees in the households and consequences of non-payment
C3 Whether water sources in community have WUCs; key functions/roles; composition of WUCs by gender
C4 WUC meetings, how regular; issues discussed; men and women's participation
C5 Whether voices, views, interests and needs of both men and women are heard
C6. Training(s) on water that water users or WUC members receive by gender and from where?

Section D: Current Efforts and Recommendations

D1 What has been done to ensure men and women participate in water collection and management
D2 Other suggestions/questions

Appendix B1b

District Key Informant Interview Guide

Section A: Respondents Identification

A1 Age; sex etc
A2 Current position in district
A3 Major role with regard to access or provision of safe water in district

---

Section B: Access to Water

B1 Major sources of drinking water for people in Lwengo District *("improved" and "unimproved" water sources)*
B2 Who collects water in households in the district? Transport used by individuals to collect water, any other problems in water collection
B3 Major problems communities in district have in accessing water. Who is most affected and how by gender

---

Section C: Participation and Decision Making Over Water Resources

C1 Major actors in the provision or construction of improved water sources in district; how actors involve rural of communities in establishment of improved water sources; gender sensitive or?
C2 How rural communities operate, maintain and repair improved water sources? Who is more active and why by gender
C3 Any training (s) on water that water users/WUCs receive, by who and whether men and women are equally involved

---

Section D: Efforts and Recommendations

D1 Efforts to ensure both men and women equally participate in water collection and governance of rural water sources in district
D2 Suggestions

Appendix B1c

Macro Level Key Informant Interview Guide

Section A: Respondents Identification

A1 Age; sex etc
A2 Current position in organisation
A3 Major role with regard to access or provision of safe water

---

Section B: Access to Water

B1 Major sources of drinking water for rural communities in people in Uganda
B2 Who collects water in rural areas and why? How water is collected by gender
B3 Major problems rural communities face in accessing water *(from improved and unimproved sources)*; who is most affected and how

---

Section C: Participation and Decision Making Over Water Resources

C1 Major actors in provision/construction of improved water sources in Uganda.
C2 Involvement of rural communities in establishment and gender sensitivity.
C3 How rural communities ensure improved water sources are operated, maintained and repaired? Gender integration *(men and women's involvement in WUCs, community contributions, meetings/decision-making processes, needs, interests and voices of women and men, etc)*
C4 Any training(s) on water given to water users/WUCs, from where and who is involved

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Section D: Efforts and Recommendations

D1 Efforts to ensure both men and women participate in water management in rural communities?
D2 Recommendations/Suggestions

Appendix B2 - Focus Group Guides

Appendix B2a

Focus Group Guide for Male and Female Water Users

A. Introduction

1. Introductions –respondents and facilitators
2. Objectives of FG
3. Most important household needs in community/village

B. Access to Water

4. Major sources of water and why used.
5. Rights in using these water sources; decision-making in use of water sources *(by gender).*
6. Who collects water in households, transport used, how long it takes the different persons by gender
7. Problems women, men or children face in accessing water.

C. Participation in Water Management

8. How water source was established –initiation, construction, funder, choice of technology, site etc; role of male and female members of WUG in establishing the source.
9. Role of men and women in operation, maintenance and repair of water source - user fees; who pays; penalties for defaulters etc
10. Key functions/roles of WUC, positions, composition and contributions by gender. How often WUC meets, issues discussed; views, needs, interests and priorities of women (and men); participation patterns by gender.
11. Training given on management of water source; men and women's participation.
12. Current needs, interests and priorities with regard to water? Suggestions on gender-sensitive participation

Appendix B2b

Focus Group Guide for Water User Committee (WUC) Members

A. Introduction

1. Introductions –respondents and facilitators
2. Objectives of FG

B. Access to Water

3. Distances between water sources and households WUG members. How long it takes to fetch water from the source *(by gender).*
4. Problems women, men or children face in accessing, using and collecting water from the water source.
5. ***(If water source is malfunctioning)*** Why water source is not functioning. How breakdown has affected men, women and children's access to water **(***aspects such as distance, amount of water, alternative sources etc)*

C. Participation in Water Management

6. How water source was established –initiation, construction, funder, etc. Role of members of WUG in establishing the water source.
7. Key functions/roles as a WUC; composition of WUC by gender and knowledge of gender composition given in water policy.
8. Maintenance and repair of water source; major problems.
9. Decision-making processes – how often meet as WUC, issues discussed and involvement of male and female community members
10. Views, needs, interests and priorities of women and men in meetings/decision-making processes
11. Training on water or management of water source and gender composition of attendees.
12. Suggestions on men and women's participation in water collection, use and management.

Appendix C: Ethical Issues

Appendix Ca

NUI Maynooth Ethical Clearance Letter

NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH
MAYNOOTH, CO. KILDARE, IRELAND

NUI MAYNOOTH
Ollscoil na hÉireann Má Nuad

Dr Carol Barrett
Secretary to NUI Maynooth Ethics Committee

8th November, 2010

Richard Asaba Bagonza
Sociology Department

RE: *Application for Ethical Approval for a project entitled*:
"Ancillary Men or Women? Gender and Water Resource Management in a Rural Area in Sough Central Uganda"

Dear Richard,

The Ethics Committee evaluated the above project for approval and we would like to inform you that ethical approval has been granted. This approval is contingent on the two provisos communicated by the Committee and attached.

Kind Regards,

Dr Carol Barrett
Secretary to NUI Maynooth Ethics Committee

Cc: Dr G Honor Fagan, Senior Lecturer
(Dean of Graduate Studies)
Sociology Department

Appendix Cb

Consent Letter/Form

WATER IS LIFE: *AMAZZI BULAMU* PROJECT

Consent Letter/Form for Project no. 7: 'Gender, Participation and Local Water Governance: A Case Study of Makondo Parish in Rural Uganda'

Contacts

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Project Manager, Water Is Life: *Amazzi Bulamu* Project, Tel: + 353 42 9391016; Email: arleen.folan@dkit.ie

Dear Sir/Madam,

I am one of the doctoral research students on the Water Is Life: *Amazzi Bulamu* Project (WIL) and registered at NUI Maynooth in the Republic of Ireland. The project has already been introduced to citizens, key officials, and local leaders in the villages of Makondo Parish, Ndagwe Sub County, Masaka and Lwengo Districts. My study is one of the eight on the project, and I am interested in understanding how men, women, girls, and boys: i) access water in your Village/Parish/District; ii) perform different roles (such as collecting water); and iii) participate in water management at household and community levels.

I will be carrying out a household survey, key informant interviews, focus groups, participant observation and community meetings in Makondo Parish, in which I will interact with the local community and various officials at village, and Sub County and District Levels. As one of the administrative/technical/authoritative persons in this Village/Parish/District, I am requesting for your cooperation and permission, and if you accept, to sign this form on their behalf. At a later stage, I may need to discuss with you various aspects of my study. Your participation is voluntary – you can choose not to participate at any time and you are free not to answer particular questions. Your decision will not affect your relationship with me or the Water Is Life: *Amazzi Bulamu* Project. My interviews will not take much of the community's or your time, and your time and all the information the community/you provide will be treated in the strictest confidence by both myself and WIL. I will lock it in my Project office and it will not be possible for anyone to identify your individual views or attitudes. The results of this study will be communicated to you and other participants at village, Sub County and District levels through workshops, leaflets or brochures (some translated in local language), and narrative or technical reports at a later time.

If you have any question or problem about my study, always feel free to contact me or the WIL Project Management on the above addresses.

Thank You Very Much

..... **.....**

Richard Asaba Bagonza **On Behalf of the District/Sub County/Parish/Village**

Appendix D

List of Study Participants

No.	Category/ Method	Village, Parish and Sub County Levels	District Level	National Level
1	Key Informants	• Village Chairpersons (of six villages, all male) • Makondo Parish Chief (male) • Parish Development Committee/LC II Chairperson (male) • Ndagwe Sub County Officials (all male) -Sub County Chief -Sub County Chairperson -Sub County Health Assistant -Hand Pump Mechanic • MMM (male)	District Technical Persons (District Water Officer, male)	• Major NGOs in rural water sector -UWASNET (one female, Policy/Advocacy Analyst) -Water Aid Uganda (two female officials: Head of Campaigns/Advocacy and Programme Coordinator, Research) -Network for Water and Sanitation (NETWAS), one male (Research Officer) and one female (Program Assistant) -Triple-S (one female, Country Coordinator) • Ministry of Gender, Labour and Social Development (Senior Gender Officer) • Directorate of Water Development (DWD) Officials -Commissioner for Rural Water and Principal Sociologist (both male) • Private Sector (Buyaya Technical Services, two individuals, one male and one female)
2	Focus Groups	• Male Water Users (5) • Female Water Users (5) • Male and Female Water Users (1) • WUC Members (4 committees)		
3	Survey (Household level)*	• Male headed households (420) • Female headed households- *dejur* and *de-facto* (175) • Child headed households (7)		
4	Participant Observation (Sessions)	• 20 in Makondo Village (Protected Spring and Open Well) • 20 in Misaana Village (at Shallow Well and Pond) • 20 in Kibuye Village (at bore-hole and open pond)		

* selected by stratified random sampling as stated in Chapter Four

Bibliography

Acker, Joan. 1992. "From Sex Roles to Gendered Institutions." *Contemporary Sociology* 21:565-569.

Ademun, Stella Rose 2009. "Domestic Water Supply: An Evaluation of the Impacts; Challenges and Prospects on Women in Rural Households in Uganda." Environmental Studies, Lund, Lund.

Agarwal, Bina. 1997a. ""Bargaining" and Gender Relations: Within and Beyond the Household." *Feminist Economics* 3:1-51.

Agarwal, Bina. 1997b. "Editorial: Re-Sounding the Alert-Gender, Resources and Community Action." *World Development* 25:1373.

Agarwal, Bina. 2001. "Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework." *World Development* 29:1623.

Ahlers, Rhodante. 2002. "Moving in or Staying Out: Gender Dimensions of Water Markets." Pp. 65–86 in *Protecting a Sacred Gift: Water and Social Change in Mexico*, edited by Whiteford, Scott and Roberto eds Melville. San Diego: Center for US–Mexico Studies at UC–San Diego.

Ahlers, Rhodante and Margreet Zwarteveen. 2009. "The Water Question in Feminism: Water Control and Gender Inequities in a Neo-Liberal Era." *Gender, Place & Culture: A Journal of Feminist Geography* 16:409-426.

Ahmed, Sara. 2001. "Empowering Rural Women? Policies, Institutions, and Gendered Outcomes in Natural Resources Management." *Development in Practice* 11:535-537.

Ali, Mansoor , Ella Sprung, and Jojoh Faal. 2008. "Technology Choices in Water Supply and Sanitation: Report on Collaborative Research, Learning and Networking between Ethiopia, Sudan and Kenya " Research-inspired Policy and Practice Learning in Ethiopia and the Nile region (RiPPLE), Addis Ababa.

Amigot, Patricia and Margot Pujal. 2009. "On Power, Freedom, and Gender a Fruitful Tension between Foucault and Feminism." *Theory & Psychology* 19:646-669.

Arendell, Terry. 1997. "Reflections on the Researcher-Researched Relationship: A Woman Interviewing Men." *Qualitative Sociology* 20:341-368.

Arendt, Hannah 1970. *On Violence* New York: Harcourt Brace & Co.

Arku, Frank S. 2010. "Time Savings from Easy Access to Clean Water: Implications for Rural Men's and Women's Well-Being." *Progress in Development Studies* 10:233-246.

Arku, Frank S. and Cynthia Arku. 2010. "I Cannot Drink Water on an Empty Stomach: A Gender Perspective on Living with Drought." *Gender & Development* 18:115-124.

Armstrong, Adrian C. 2009. "Viewpoint- Further Ideas Towards a Water Ethic." *Water Alternatives* 2:138-147.

Arouna, Aminou and Stephan Dabbert. 2010. "Determinants of Domestic Water Use by Rural Households without Access to Private Improved Water Sources in Benin: A Seemingly Unrelated Tobit Approach." *Water Resources Management* 24:1381-1398.

Asaba, Richard Bagonza 2007. "Gender Dynamics in Malaria and Its Control among Pastoral and Agro-Pastoral Communities in Nyabushozi County, Kiruhura District." MSc Thesis, Institute of Environment and Natural Resources, Makerere University, Kampala.

Asiimwe, Brenda. 2009. "Community Level Water Governance and Pro-Poor Outcomes in the Water and Sanitation Sector: The Case of Mbarara District, Uganda." Graduate School of Development Studies, International Institute of Social Studies, Hague.

Asingwire, Narathius 2011. "Assessment of the Effectiveness of the Community-Based Maintenance System for Rural Water Supply Facilities." Ministry of Water and Environment (MWE) and Directorate of Water Development (DWD), Kampala.

Badoun, S. 2006. "Roles and Functions of Water in African Community Life." in *Proceedings of the Theme: Water and Cultural Diversity*, edited by Anon. Paris: UNESCO.

Bailey, Kenneth D. 1994. *Methods of Social Research*. New York: The Free Press.

Banda, B. M., S. Farolfi, and R. M. Hassan. 2007. "Estimating Water Demand for Domestic Use in Rural South Africa in the Absence of Price Information." *Water Policy* 9:513-528.

Barbour, Rosaline S. and Jenny Kitzinger. 1999. "Developing Focus Group Research: Politics, Theory and Practice." London: Sage.

Bartky, Sandra 1988. "Foucault, Femininity and the Modernisation of Patriarchal Power" in *Feminism and Foucault: Reflections on Resistance*, edited by Diamond Irene and Lee Quinby. Boston: Northeastern University Press.

Beard, Victoria A. and Randi S. Cartmill. 2007. "Gender, Collective Action and Participatory Development in Indonesia." *International Development Planning Review* 29:185-213.

Beccar, Lily, Rutgerd Boelens, and Paul Hoogendam. 2002. "Water Rights and Collective Action in Community Irrigation." Pp. 1–19 in *In Water Rights and Empowerment*, edited by Boelens, Rutgerd and Paul Hoogendam. Assen: Van Gorcum.

Benedict, Michael P. 1998. "The Role of Women in Water Resources Management: The Tanzania Case." *International Journal of Water Resources Development* 14:499-504.

Bennett, Vivienne, Sonia Dávila-Poblete, and María Nieves Rico. 2008. "Water and Gender: The Unexpected Connection That Really Matters." *Journal of International Affairs* 61:107-126.

Berner, Erhard 2010. "Introduction: Participation between Tyranny and Emancipation " in *Participation for What: Social Change or Social Control?*, edited by Gómez, Georgina M., Ariane A. Corradi, Pedro Goulart, and Rose Namara. The Hague: ISS and Hivos.

Bimla, Gandi S., M Dilbaghi, and K Raina. 2003. "Rural Women Carry the Load of Fetching Water." *Indian Journal of Social Work* 64:65-75.

Biswas, Asit K. 2004. "From Mar Del Plata to Kyoto: An Analysis of Global Water Policy Dialogue." *Global Environmental Change* 14:81-88.

Blackden, Mark, C. and Quentin Wodon. 2006. "Gender, Time Use and Poverty in Sub-Saharan Africa." in *World Bank Working Paper No. 73*. Washington, D.C.: The World Bank.

Blake, Michael. 2001. "Distributive Justice, State Coercion and Autonomy." *Philosophy and Public Affairs* 30:257-296.

Blanchard, Kenneth H., John P. Carlos, and Alan Randolph. 1996. *Empowerment Takes More Than a Minute*. San Francisco: Berrett-Koehler.

Boelens, Rutgerd and Paul Hoogendam. 2002. "Water Rights and Empowerment." Assen: Van Gorcum.

Bolt, E. and C. Fonseca. 2001. "Keep It Working: A Field Manual to Support Community Management of Rural Water Supplies." Delft IRC International Water and Sanitation Centre.

Boone, Christopher, Peter Glick, and David E. Sahn. 2011. "Household Water Supply Choice and Time Allocated to Water Collection: Evidence from Madagascar." *Journal of Development Studies* 47:1826-1850.

Bordo, Susan 1989. "The Body and the Reproduction of Femininity: A Feminist Appropriation of Foucault" in *Gender/Body/Knowledge: Feminist Reconstructions of Being and Knowing.* Edited by Jaggar Alison M. and Susan R. Bordo. New Brunswick: Rutgers UP.

Boserup, Esther. 1970. *Women's Role in Economic Development*. New York: St. Martin's Press.

Braidotti, Rosi, Ewa Charkiewicz, Sabine Hausler, and Saskia Wieringa. 1994. *Women, the Environment and Sustainable Development: Towards a Theoretical Synthesis*. London, NI: Zed Books and INSTRAW.

Bryman, Alan. 2008. *Social Research Methods*. New York: Oxford University Press.

Byrne, Anne and Ronit Lentin. 2000. "(Re)Searching Women: Feminist Research Methodologies in the Social Sciences in Ireland." Dublin: Institute of Public Administration.

Buchy, Marléne. 2006. "Social and Gender Analysis in Natural Resource Management: Learning Studies and Lessons from Asia Edited by Ronnie Vernooy." *Development & Change* 37:1154-1155.

Buor, Daniel. 2004. "Water Needs and Women's Health in the Kumasi Metropolitan Area, Ghana." *Health & Place* 10:85.

Burke, Johnson, R and Anthony Onwuegbuzie, J. . 2004. "Mixed Methods Research: A Research Paradigm Whose Time Has Come." *Educational Researcher* 33:14-26.

Butler, Judith. 1993. *Bodies That Matter: On the Discursive Limits of Sex*. New York: Routledge.

Cahn, Steven M. 2002. *Classics of Political and Moral Philosophy*. New York: Oxford University Press.

CAP-NET and GWA. 2006. "Why Gender Matters: A Tutorial for Water Managers." Delft: CAP-NET International network for Capacity Building in Integrated Water Resources Management.

Castresana, Pérez de Mendiguren Juan Carlos 2004. "Productive Uses of Water at the Household Level: Evidence from Bushbuckridge, South Africa." in *Beyond Domestic: Case Studies on Poverty and Productive Uses of Water at Household Level. IRC Technical Paper Series 41*, edited by Moriarty, Patrick, John Butterworth, and Barbara Van Koppen. Delft: International Water and Sanitation Centre (IRC).

Chacko, Elizabeth. 2004. "Positionality and Praxis: Fieldwork Experiences in Rural India." *Singapore Journal of Tropical Geography* 25:51-63.

Chiseri-Strater, Elizabeth. 1996. "Turning in Upon Ourselves: Positionality, Subjectivity, and Reflexivity in Case Study and Ethnographic Research." in *Ethics and Responsibility in Qualitative Studies of Literacy* edited by Mortensen, P. and G. E. Kirsch. Urbana, IL: NCTE.

Churchland, Paul M. . 1995. *The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain*, vol. MIT Press. Cambridge, MA.

Cleaver, Frances. 1999. "Paradoxes of Participation: Questioning Participatory Approaches to Development." *Journal of International Development* 11:597-612.

Cleaver, Frances. 2000. "Moral Ecological Rationality, Institutions and the Management of Common Property Resources." *Development & Change* 31:361.

Cleaver, Frances. 2004. "The Limits of Participation in Development " in *The 16th Danish Sahel Workshop, 5-6 January 2004: Current politics in West Africa; The Use of Local Knowledge in Applied Research; Participation in Project Planning and Capacity Building "*, vol. Occasional Paper No. 17, edited by Lykke, Anne Mette, Mette Kirkebjerg Due, Metus Kristensen, and Ivan Nielsen. Aarhus Sahel-Sudan Environmental Research Initiative (SEREIN)

Cleaver, Frances and Tom Franks. 2007. "New Directions for Water Governance." Institute of Development Studies, Brighton, RE.

Cleaver, Frances, Tom Franks, Boesten Jelke, and Kiire Angela. 2005. "Water Governance and Poverty:What Works for the Poor?" Bradford Center for International Development, University of Bradford, Bradford.

Cleaver, Frances and Kristin Hamada. 2010. "'Good' Water Governance and Gender Equity: A Troubled Relationship." *Gender & Development* 18:27-41.

Cleaver, Frances and Anna Toner. 2006. "The Evolution of Community Water Governance in Uchira, Tanzania: The Implications for Equality of Access, Sustainability and Effectiveness." *Natural Resources Forum* 30:207-218.

Coles, Anne and Tina Wallace. 2005. *Gender, Water and Development*. Oxford: Berg.

Connell, Raewyn W. 1987. *Gender and Power: Society, the Person and Sexual Politics*. Cambridge: Polity Press.

Connell, Raewyn W. 2005. *Masculinities*. 2nd edition, Cambridge: Polity Press.

Cooke, Bill and Uma Kothari. 2001. "Participation: The New Tyranny." New York: Zed Books.

Cornwall, Andrea. 2002. "Making Spaces, Changing Places: Situating Participation in Development." in *IDS Working Paper 170*. Brighton: Institute of Development Studies.

Cornwall, Andrea. 2003. "Whose Voices? Whose Choices? Reflections on Gender and Participatory Development." *World Development* 31:1325.

Cornwall, Andrea. 2008. "Unpacking Participation: Models, Meanings and Practices." *Community Development Journal* 43:269-269.

Cornwall, Andrea, Jasmine Gideon, and Kalpana Wilson. 2008. "Introduction: Reclaiming Feminism: Gender and Neoliberalism." *IDS Bulletin* 39:1-9.

Cornwall, Andrea and C Nyambu-Musembi. 2004. "Putting the 'Rights-Based Approach' to Development into Perspective." *Third World Quarterly* 25:1415-1437.

CREAM. 2009. "Assessment of Factors Affecting Functionality of Water Sources: A Case Study in Koboko District." SNV, Kampala.

Creswell, John W. 2003. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. California: Sage Publications, Inc.

Crewell, John W. and Plano Vicki L. Clark. 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, California: Sage Publications, Inc.

Crow, Ben. 2001. "Water: Gender and Material Inequalities in the Global South." Milton Keynes, UK: Open University.

Crow, Ben and Jamie McPike. 2009. "How the Drudgery of Getting Water Shapes Women's Lives in Low-Income Urban Communities " *Gender, Technology and Development* 13:43-68.

Crow, Ben and Furharna Sultana. 2002. "Gender, Class, and Access to Water: Three Cases in a Poor and Crowded Delta." *Society & Natural Resources* 15:709-724.

Dahl, Robert A. 1961. *Who Governs? Democracy and Power in an American City*. New Haven, CT: Yale University Press.

Davidson, J. and E. Stratford. 2007. "En(Gender)Ing the Debate About Water's Management and Care - Views from the Antipodes." *Geoforum* 38:815-827.

Davis, Jennifer and Dale Whittington. 1998. ""Participatory" Research for Development Projects: A Comparison of the Community Meeting and Household Survey Techniques." *Economic Development and Cultural Change* 47:73-94.

Denzin, Norman K and Yvonna S Lincoln. 1994. *The Sage Handbook of Qualitative Research*. Thousand Oaks, CA: Sage Publications, Inc.

Denzin, Norman K and Yvonna S Lincoln. 2005. *The Sage Handbook of Qualitative Research.* Thousand Oaks, CA: Sage Publications, Inc.

Descheemaeker, Katrien, Amede Tilahun, and Haileslassie Amare. 2009. "Livestock and Water Interactions in Mixed Crop-Livestock Farming Systems of Sub-Saharan Africa: Interventions for Improved Productivity." International Water Management Institute, Colombo, Sri Lanka.

Devasia, Leelamma. 1998. "Safe Drinking Water and Its Acquisition: Rural Women's Participation in Water Management in Maharashtra, India." *International Journal of Water Resources Development* 14:537-546.

Deveaux, Monique. 1994. "Feminism and Empowerment: A Critical Reading of Foucault." *Feminist Studies* 20:223-247.

Dey, Nepal C. and Mehrab Ali. 2010. "Women's Role in Managing Household Water in Rural Bangladesh." Research and Evaluation Division, BRAC Centre, BRAC, Dhaka.

DMTC, Ltd. 2009. "Gender Analysis of the Water and Sanitation Sector." Kampala: Ministry of Water and Environment.

Donahoe, Debra Anne. 1999. "Measuring Women's Work in Developing Countries." *Midiendo el trabajo femenino en los países en desarrollo.* 25:543-576.

Dreyfus, Hubert and Paul Rabinow. 1983. *Michel Foucault: Beyond Structuralism and Hermeneutics* Chicago: University of Chicago Press.

Dryzek, John S. 1997. *The Politics of the Earth: Environmental Discourses* Oxford: Oxford University Press.

Ebato, Michiko and Barbara van Koppen. 2005a. " gender Relations and Management of Multiple Water Use System in Adidaero Watershed, Tigray Region in Northern Ethiopia." in *International Research Workshop on 'Gender and Collective Action', 17-21 October 2005*. Chiang Mai, Thailand.

Ebato, Michiko and Barbara van Koppen. 2005b. "Gender Relations and Management of Multiple Water Use System in Adidaero Watershed, Tigray Region in Northern Ethiopia." in *International Research Workshop on 'Gender and Collective Action', 17-21 October 2005*. Chiang Mai, Thailand.

Electoral Commission. 2011. "Uganda Voters Register, 2011." Kampala: Government of Uganda.

Esrey, Steven A., Jean-Pierre Haricht, Michael C. Latham, Daniel G. Stsler, and George Casella. 1988. "Drinking Water Source, Diarrheal Morbidity, and Child Growth an Villages with Both Traditional and Improved Water Supplies in Rural Lesotho, Southern Africa." *American Journal of Public Health* 78:1451.

Evans, B., M. Joas, S. Sundback, and K. Theobald. 2005. *Governing Sustainable Cities*. London: Earthscan.

Fabricius, C. and S. Collins. 2007. "Community-Based Natural Resource Management: Governing the Commons." *Water Policy* 9:83-97.

Fagan, G.H. 1999. "Cultural Politics and (Post) Development Paradigm(s)" in R.Munck and D. O Hearn in *Critical Development Theory: Contributions to a New Paradigm,* edited by Ronaldo Munck and Denis O Hearn. Zed Press.

Fagan, G.H., R. Munck and K. Nadasen 1996. "Gender, Culture and Development: A South African Experience".*The European Journal of Development Research* 8:93-110.

Fink, Arlene. 1995. *How to Design Surveys*. Thousand Oaks, CA: Sage.

Follett, Mary Parker. 1942. "Power " in *Dynamic Administration: The Collected Papers of Mary Parker Follett,* edited by Metcalf, Henry C. and L. Urwick. New York: Harper.

Fonjong, Lotsmart N. 2008. "Gender Roles and Practices in Natural Resource Management in the North West Province of Cameroon." *Local Environment* 13:461-475.

Fonow, M. M. and J. A. Cook. 2005. "Feminist Methodology: New Applications in the Academy and Public Policy." *Signs* 30:2211-2236.

Fortes, M. 1969. *The Dynamics of Clanship among the Tallensi*. Oosterhout: Anthropological Publications.

Foucault, Michel. 1976. *Histoire De La Sexualité, I: La Volonté De Savoir [the History of Sexuality. Vol. I: The Will to Knowledge]*. Paris: Gallimard.

Foucault, Michel. 1982a. "The Subject and the Power." Pp. 208-226 in *Michel Foucault: Beyond Structuralism and Hermeneutics*, edited by Dreyfus, H.L and P. Rabinow. Chicago: University of Chicago Press.

Foucault, Michel 1981. "History of Sexuality, Translated by Robert Hurley." vol. 1. London: Penguin.

Foucault, Michel 1982b. "On the Genealogy of Ethics: An Overview of Work in Progress." Pp. 229-252 in *Michel Foucault: Beyond Structuralism and Hermeneutics*, edited by Dreyfus, H.L and P. Rabinow. Chicago: University of Chicago Press.

Franks, Paul. 2001. "Participatory Development in the World Bank: The Primacy of Process " in *Participation: The New Tyranny?* , edited by Cooke, Bill and Uma Kothari. London: Zed Books.

Franks, Tom and Frances Cleaver. 2007. "Water Governance and Poverty: A Framework for Analysis." *Progress in Development Studies* 7:291-306.

Fung, Archon. 2006. "Varieties of Participation in Complex Governance " *Public Administration Review-Washington DC* 66:66-75.

Gaventa, J. 2004a. "Participatory Development or Participatory Democracy? Linking Participatory Approaches to Policy and Governance." in *Participatory Learning and*

Action 50: Critical Reflections, Future Directions, edited by Chambers, R. , N. Kenton, and H. Ashley. London: IIED.

Gaventa, John. 2004b. "Towards Participatory Governance: Assessing the Transformative Possibilities." in *Participation: From Tyranny to Transformation? Exploring New Approaches to Participation in Development*, edited by Hickey, Samuel and Giles Mohan. London: Zed Books.

Gaventa, John. 2006. "Triumph, Deficit or Contestation? Deepening the 'Deepening Democracy' Debate." vol. Working Paper No. 264, edited by Studies, Institute of Development. Brighton: Institute of Development Studies.

Gaventa, John and Andrea Cornwall. 2006. "Challenging the Boundaries of the Possible: Participation, Knowledge and Power." *IDS Bulletin* 37:122-128.

Gaynor, Niamh 2010. *Transforming Participation? The Politics of Development in Malawi and Ireland*. London: Palgrave Macmillan.

Geere, Jo-Anne L, Paul R Hunter, and Paul Jagals. 2010. "Domestic Water Carrying and Its Implications for Health: A Review and Mixed Methods Pilot Study in Limpopo Province, South Africa." *Environmental Health* 9:1-13.

Ghosh, Nandita. 2007. "Women and the Politics of Water: An Introduction." *International Feminist Journal of Politics* 9:443-454.

Giddens, Anthony 2006. *Sociology*. Cambridge: Polity Press.

Gilchrist, Valerie J and Robert Williams, L. 1999. ""Key Informant Interviews"." in *Doing Qualitative Research*, edited by Crabtree, Benjamin F. and William L. Miller. Thousand Oaks, CA: Sage.

Gleick, Peter H. 2003. "Water Use." *Annual Review of Environment & Resources* 28:275-314.

Goetz, Judith P and Margaret Le Compte, D. 1984. *Ethnography and Qualitative Design in Educational Research*. New York: Academic Press.

GOU. 1995. "The Water Statute." Kampala: Ministry of Water and Environment.

GOU. 1999. "The National Water Policy." Kampala: Ministry of Water, Lands and Environment.

GOU. 2002. "Deepening the Understanding of Poverty: Second Participatory Poverty Assessment " Kampala: Ministry of Finance, Planning and Economic Development.

GOU. 2006. "Opportunities for Mining Investment." Entebbe: Ministry of Energy and Mineral Development.

GOU. 2007a. "The Uganda Gender Policy." Kampala: Ministry of Gender, Labour and Social Development .

GOU. 2007b. "Water and Sanitation Sector District Implementation Manual." Kampala: Ministry of Water and Environment.

GOU. 2008a. "The State of Uganda Population Report, 2008: The Role of Culture, Gender and Human Rights in Social Transformation and Sustainable Development" Kampala: Ministry of Finance, Planning and Economic Development.

GOU. 2008b. "Water and Sanitation Sector Performance Report, 2008." Kampala: Ministry of Water and Environment.

GOU. 2009a. "Water and Environment Sector Performance Report, 2009." Kampala: Ministry of Water and Environment.

GOU. 2009b. "Water and Sanitation Sector: Sectoral Specific Schedules/Guidelines 2009/10." Kampala: Ministry of Water and Environment.

GOU. 2009c. "Water and Sanitation Sub-Sector Gender Strategy (2010/11- 2014/15)". Kampala: Ministry of Water and Environment, Government of Uganda.

GOU. 2010a. "National Development Plan (2010/11-2014/15)". Kampala: National Planning Authority.

GOU. 2010b. "Water and Environment Sector Performance Report, 2010." Kampala: Ministry of Water and Environment.

GOU. 2011. "Water and Environment Sector Performance Report, 2011." Kampala: Ministry of Water and Environment.

GOU. 2011 "National Framework for Operation and Maintenance of Rural Water Supplies in Uganda." Kampala: Ministry of Water and Environment.

GOU. 2012. "Water and Environment Sector Performance Report, 2012." Kampala: Ministry of Water and Environment.

Gouws, Amanda. 2008. "Changing Women's Exclusion from Politics: Examples from Southern Africa." *African & Asian Studies* 7:537-563.

Green, Cathy and Sally Baden. 1994. " water Resources Management: A Macro-Level Analysis from a Gender Perspective." Brighton, RE.

Gressier, Lucille and Ines Ayari. 2011. "Women and Water-Resource Management in Africa." Wikigender. Available at http://www.wikigender.org/index.php/Women_and_Water-Resource_Management_in_Africa.

Guillemin, Marilys and Lynn Gillam. 2004. "Ethics, Reflexivity and 'Ethically Important Moments' in Research." *Qualitative Inquiry* 10:261-280.

GWA. 2006. "Mainstreaming Gender in Water Management: A Resource Guide." Pp. 240, edited by Alliance, Gender and Water. Delft: Gender and Water Alliance.

GWP. 2000. "Integrated Water Resource Management." TAC Background Papers. Stockholm, SE: Global Water Partnership.

Haque, M. Shamsul. 2000. "Representation of Women in Governance in Singapore: Trends and Problems." *Asian Journal of Political Science* 8:59.

Harding, Sandra and Catherine Norberg. 2005. "New Feminist Approaches to Social Science Methodologies: An Introduction." *Journal of Women in Culture and Society* 30.

Harris, Leila M. 2009. "Gender and Emergent Water Governance: Comparative Overview of Neoliberalized Natures and Gender Dimensions of Privatization, Devolution and Marketization." *Gender, Place & Culture: A Journal of Feminist Geography* 16:387-408.

Hartsock, Nancy. 1990. "Foucault on Power: A Theory for Women?" Pp. 168, 170, 171 in *Feminism/Postmodernism*, edited by Linda Nicholson. New York and London: Routledge.

Hawkins, Roberta and Joni Seager. 2010. "Gender and Water in Mongolia." *Professional Geographer* 62:16-31.

Hazell, Eleanor L. 2010. "Gender, Water and Livelihoods in Mseleni: A Case Study." School of Development Studies, University of KwaZulu-Natal, Durban, Durban.

Hekman, Susan. 1990. *Gender and Knowledge: Elements of a Postmodern Feminism* Boston: North-eastern University Press.

Hesse-Biber, Nagy Sharlene and Lina Patricia Leavy. 2007. *Feminist Research Practice*. California: Sage Publications, Inc.

Holmes, Mary. 2007. *What Is Gender? Sociological Approaches*. London: Sage Publications Ltd.

Hughes, Ian and Kaye Seymour-Rolls. 2000. "Participatory Action Research: Getting the Job Done." in *Action Research E-Reports:4*.

Hunt, J. 2004. "Introduction to Gender Analysis Concepts and Steps." *Development Bulletin* 64:100-106.

Ivens, Saskia. 2008. "Does Increased Water Access Empower Women?" *Development* 51:63-67.

James, A.J. . 2004. "Linking Water Supply and Rural Enterprise: Issues and Illustrations from India." in *Beyond Domestic: Case Studies on Poverty and Productive Uses of Water at Household Level. Irc Technical Paper Series 41*, edited by Moriarty, Patrick, John

Butterworth, and Barbara Van Koppen. Delft: International Water and Sanitation Centre (IRC).

Johnson, Burke R. and Anthony Onwuegbuzie, J. 2004. "Mixed Methods Research: A Research Paradigm Whose Time Has Come." *Educational Researcher* 33:14-26.

Jonsson, Anna. 2005. "Public Participation in Water Resources Management: Stakeholder Voices on Degree, Scale, Potential, and Methods in Future Water Management." *AMBIO - A Journal of the Human Environment* 34:495-500.

Joy, K. J and S. Paranjape. 2005. "Women and Water: Relationships, Experiences, Approaches." Pp. 351-91 in *In Women of India: Colonial and Post-Colonial Periods* edited by Ray, B. New Delhi Sage.

Kabeer, Naila. 2010. "Women's Empowerment, Development Interventions and the Management of Information Flows." *IDS Bulletin* 41:105-113.

Kabeer, Naila. 1994. *Reversed Realities: Gender Hierarchies in Development Thought*. London: Verso.

Kabeer, Naila. 1999. "Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change* 30:435-464.

Kabeer, Naila. 2005. "Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal." *Gender & Development* 13:13-24.

Kanyesigye, Juliet, Joseph Anguria, Edison Niwagaba, and Tim Williamson. 2004 "Are National Water and Sanitation Objectives Achieved on the Ground? A Review of Service Delivery, Planning Monitoring and Evaluation in Tororo and Wakiso Districts." WaterAid, Uganda, Kampala.

Katebire, Denis A. 2007. *Social Research Methodology*. Kampala: Makerere University Printery.

Kerfoot, Deborah and David Knights. 1994. "Into the Realm of the Fearful: Power, Identity and the Gender Problematic." Pp. 317 in *Power/Gender: Social Relations in Theory and Practice,* edited by Radtke, Lorraine and Henderikus J Stam. London/Thousand Oaks/New Delhi: Sage Publications.

Kgomotso, Phemo K. and Larry A. Swatuk. 2006. "Access to Water and Related Resources in Ngamiland, Botswana: Toward a More Critical Perspective and Sustainable Approach." *Physics & Chemistry of the Earth - Parts A/B/C* 31:659-668.

Khadka, Manohara 2010. "Actors' Interactions at the Policy Level and Implications for Exclusion: Nepal's Community Forestry " in *Participation for What: Social Change*

or Social Control?, edited by Gómez, Georgina M., Ariane A. Corradi, Pedro Goulart, and Rose Namara. The Hague: ISS and Hivos.

Kirkham, Pat. 1996. "The Gendered Object." Manchester: Manchester University Press.

Kobayashi, Audrey. 1994. "Coloring the Field: Gender, ”Race,“ and the Politics of Fieldwork." *Professional Geographer* 46:73-80.

Koestler, L., A.G. Koestler, M.A. Koestler, and Koestler V.G. 2010. "Improving Sustainability Using Incentives for Operation and Maintenance: The Concept of Water-Person Years." *Waterlines* 29:147-162.

Krishna, A. 2005. "Stages of Progress: A Community-Based Methodology for Defining and Understanding Poverty." Durham: Duke University.

Krueger, Richard and Mary Anne Casey. 2000. *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, California: Sage.

Kulkarni, Seema. 2011. "Women and Decentralised Water Governance: Issues, Challenges and the Way Forward." Pp. 64-72 in *Economic & Political Weekly*, vol. XLVI.

Kvale, Steinar. 1996 *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage.

Lane, Jon 2012. "Barriers and Opportunities for Sanitation and Water for All, as Envisaged by the New Delhi Statement." *IDS Bulletin* 43:13-20.

Laugharne, Peter J. 2003. "Towards Holistic Governance." *Democratization* 10:164-165.

Leach, Melissa and Robin Mearns. 1999. "Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resources." *World Development* 27:225.

Lefebvre, Henri. 1991. *The Production of Space*, Donald Nicholson-Smith trans., Oxford, Basil: Blackwell.

Linden, Vincent. 2005. "Mobilising Opportunities for Water Security: Politics, Institutions and Participation in Water Governance." in *Water Governance: Challenging the Consensus'*. Bradford.

Lloyd, R., B Parr, S Davies, and C Cooke. 2010. "Subjective Perceptions of Load Carriage on the Head and Back in Xhosa Women." *Appl Ergon* 41:522-529.

Lockwood, Harold. 2004. "Scaling up Community Management of Rural Water Supply: Thematic Overview Paper." Hague: IRC International Water and Sanitation Center.

Lukes, Steven. 1974. *Power: A Radical View*. London: British Sociological Association.

Lwengo District Local Government, Uganda. 2011. "Lwengo District Water and Sanitation Development Report." Lwengo: Department of Water and Sanitation, Lwengo District Local Government.

Macri, Gloria, Aine Rickard, Asaba B. Richard, Firminus Mugumya, Fagan G. Honor, Ronaldo Munck, Narathius Asingwire, Kabonesa Consolata, and Susan Linnane. 2013. "A Socio-Spatial Survey of Water Issues in Makondo Parish, Uganda." Water Is Life: Amazzi Bulamu Project, Dublin.

Maganga, Faustin P. 2002. "The Interplay between Formal and Informal Systems of Managing Resource Conflicts: Some Evidence from South-Western Tanzania." *European Journal of Development Research* 14:51.

Maharaj, Naila, Garcia Vargas M., and Richardson, G. 1999. "Mainstreaming Gender in Water Water Management: Why and How." World Water Vision, Paris.

Maharaj, Naila. 2003. "The Gender Approach to Water Management: Lessons Learnt around the Globe." Gender and Water Alliance, Delft.

Makoni, Fungai S. , Gift Manase, and Jerry Ndamba. 2004. "Patterns of Domestic Water Use in Rural Areas of Zimbabwe: Gender Roles and Realities." *Physics and Chemistry of the Earth* 29:1291-1294.

Mazvimavi, Dominic and Gagoitseope Mmopelwa. 2006. "Access to Water in Gazetted and Ungazetted Rural Settlements in Ngamiland, Botswana." *Physics and Chemistry of the Earth* 31:713-722.

McCorkel, Jill A. and Kristen Myers. 2003. "What Difference Does Difference Make? Position and Privilege in the Field." *Qualitative Sociology* 26:199.

McDonald, A. and D Kay. 1988. *Water Resources: Issues and Strategies*. New York: John Wiley and Sons.

McTaggart, Robin. 1997. "Participatory Action Research: International Contexts and Consequences." Pp. 234 in *Suny Series, Teacher Preparation and Development*, edited by Alan, Tom R. Albany, New York: State University of New York Press.

Meinzen-Dick, Ruth. 2007. "Beyond Panaceas in Water Institutions." *Proceedings of the National Academy of Sciences of the United States of America* 104:15200-15205.

Meinzen-Dick, Ruth and Zwarteveen Margreet. 1998. "Gendered Participation in Water Management: Issues and Illustrations from Water Users' Associations in South Asia." *Agriculture and Human Values* 15.

Merters, D. M. 2003. "Mixed Methods and the Politics of Human Research: The Transformative-Emancipatory Perspective." in *Handbook of Mixed Methods in Social*

and Behavioural Sciences, edited by Tashakkori, Abbas and Charles Teddlie. Thousand Oaks: CA: Sage.

Miller, Tyler G. and Scott Spoolman. 2011. *Living in the Environment: Principles, Connections, and Solutions*. Belmont, California: Brooks-Cole.

Mommen, Brecht and Jacinta Nekesa. 2010. "Connected Hand Pump Mechanics for Improved Service Delivery: A Case Study of District-Based Associations of Hand Pump Mechanics in Uganda as a Supporting Mechanism " in *2010 IRC Symposium: Pumps, Pipes and Promises: Costs Finances and Accountability for Sustainable WASH Services*. Concordia Theatre, Hague Netherlands.

Moriarty, Patrick, John Butterworth, Barbara Van Koppen, and J Soussan. 2004. "Water, Poverty and Productive Uses of Water at the Household Level " in *Beyond Domestic: Case Studies on Poverty and Productive Uses of Water at Household Level. Irc Technical Paper Series 41*, edited by Moriarty, Patrick, John Butterworth, and Barbara Van Koppen. Delft: International Water and Sanitation Centre (IRC).

Moser, Caroline. 1993. *Gender Planning and Development: Theory, Practice and Training.* London: Routledge.

Moser, Caroline. 2002. *Gender Planning and Development: Theory, Practice and Training*. London: Routledge.

Moser, Sarah. 2008. "Personality: A New Positionality?" *Area* 40:383-392.

Mosselson, Jacqueline. 2010. "Subjectivity and Reflexivity: Locating the Self in Research on Dislocation." *International Journal of Qualitative Studies in Education (QSE)* 23:479-494.

Mouffe, Chantal 1996. "Democracy, Power and the Political." in *Democracy and Difference*, edited by Benhabib, Seyla New Jersey: Princeton University Press.

Mukhopadhyay, Maitrayee. 1995. "Gender Relations, Development Practice and 'Culture'." *Gender & Development* 3:13-18.

National Council of Science and Technology. 2007. "National Guidelines for Research Involving Humans as Research Participants." Kampala: Government of Uganda.

Ndagwe Sub County Local Government, Lwengo District. 2011. "Approved 5-Year Development Plan 2010/11- 2014/15." Lwengo: Lwengo District Local Government.

Nelson, Nici and Susan Wright. 1995. *Power and Participatory Development: Theory and Practice*. London: IT Publications.

NEMA. 2004. "Masaka District State of Environment Report, 2004." National Environment Management Authority, Kampala.

NEMA. 2008. "Masaka District State of Environment Report, 2008." National Environment Management Authority, Kampala.

Neto, Frederico and Hakan Tropp. 2000. "Water Supply and Sanitation Services for All: Global Progress in the 1990s." *Natural Resources Forum* 24 225-236.

Neuman, William Lawrence. 2003. *Social Research Methods: Qualitative and Quantitative Approaches* Boston: Allyn and Bacon.

Nightingale, A. 2006. "The Nature of Gender: Work, Gender, and Environment." *Environment and Planning D-Society & Space* 24:165-185.

Nimanya, C., H. Nabunnya, S. Kyeyune, and H. Heijnen. 2011. "Uganda: Lessons for Rural Water Supply; Assessing Progress Towards Sustainable Service Delivery." IRC International Water and Sanitation Centre, The Hague and Kampala.

Noaks, Lesley and Emma Wincup. 2004. *Criminological Research: Understanding Qualitative Methods*. London: Sage.

Nuggehalli, Roshni, K and Linda Stalker Prokopy. 2009. "Motivating Factors and Facilitating Conditions Explaining Women's Participation in Co-Management of Sri-Lankan Forests." *Forest Policy and Economics* 11:288-293.

Nyong, A. O. and P. S. Kanaroglu. 1999. "Domestic Water Use in Rural Semiarid Africa: A Case Study of Katarko Village in Northeastern Nigeria." *Human Ecology: An Interdisciplinary Journal* 27:537.

O'Connor, Pat. 2000. "Changing Places: Privilege and Resistance in Contemporary Ireland." *Sociological Research Online*, November 5, 3.

O'Hara, Sarah , Tim Hannan, and Maria Genina. 2008. "Assessing Access to Safe Water and Monitoring Progress on Mdg7 Target 10 (Access to Safe Water and Basic Sanitation): Lessons from Kazakhstan." *Water Policy* 10:1-24.

Oakley, Ann. 1972. *Sex, Gender and Society*. London: Temple Smith.

Oakley, Ann. 1998. "Gender, Methodology and People's Ways of Knowing: Some Problems with Feminism and the Paragigm Debate in Social Science " *Sociology* 32:707-731.

Oakley, Ann and Juliet Mitchell. 1997. "Who's Afraid of Feminism? Seeing through the Backlash." London: Hamish Hamilton.

Odgaard, Rie. 2002. "Scrambling for Land in Tanzania: Process of Formalisation and Legitimisation of Land Rights." *European Journal of Development Research* 14:71.

Oliga, John C. 1996. "Power, Ideology, and Control." in *Contemporary Systems Thinking*, edited by Flood, Robert L. . New York Plenum Press.

Osinde, Rose 2004. "Propoor Water Governance: A Literature Review." Unpublished Paper for Bradford Centre for International Development.

Osinde, Rose and Mandy Turner. 2007. "Competition for Water: Are Water Riots Greater Threat Than Water Wars?" in *New Directions for Water Governance*, vol. 67, edited by Cleaver, Frances and Tom Franks: id21 insights.

Overholt, Catherine, Mary Anderson, Kathleen Cloud, and James Austin. 1985. *Gender Roles in Development Projects: Cases for Planners*. West Hartford, CT: Kumarian Press.

Panda, Smita Mishra. 2007. "Women's Collective Action and Sustainable Water Management: Case of Sewa's Water Campaign in Gujarat, India." in *International Research Workshop on 'Gender and Collective Action', October 17-21, 2005*. Chiang Mai, Thailand: Institute of Rural Management (IRMA).

Pandolfelli, Lauren, Ruth Meinzen-Dick, and Stephan Dohrn. 2008. "Gender and Collective Action: Motivations, Effectiveness and Impact." *Journal of International Development* 20:1-11.

Parpart, Jane L.., Patricia M Connelly, and Eudine V. Barriteau. 2000. "Theoretical Perspectives on Gender and Development. ." Ottawa: International Development Research Centre.

Peters, D.A. 1993. "Improving Quality Requires Consumer Input: Using Focus Groups." *Journal of Nursing Care Quality* 7:34-41.

Plummer, Janelle and Tom Slaymaker. 2007. "Rethinking Governance in Water Services." vol. Working Paper 284. London, SE: Overseas Development Institute.

Pretty, Jules N. 1995. "Participatory Learning for Sustainable Agriculture." *World Development* 23:1247.

Prokopy, Linda Stalker. 2004. "Women's Participation in Rural Water Supply Projects in India: Is It Moving Beyond Tokenism and Does It Matter?" *Water Policy* 6:103-116.

Prokopy, Linda Stalker. 2009. "Determinants and Benefits of Household Level Participation in Rural Drinking Water Projects in India." *Journal of Development Studies* 45:471-495.

Raby, Namika. 2006. "Liquid Relations: Contested Water Rights and Legal Complexity." *American Anthropologist* 108:920-921.

Rached, Eglal, Eva Rathgeber, and David B (eds.) Brooks. 1996. *Water Management in Africa and the Middle East: Challenges and Opportunities*. Ottawa: IDRC.

Radtke, Lorraine and Henderikus J. Stam. 1994a. "Introduction " in *Power/Gender: Social Relations in Theory and Practice*, edited by Radtke, Lorraine and Henderikus J. Stam. London/Thousand Oaks/New Delhi: Sage Publications.

Radtke, Lorraine and Henderikus J. Stam. 1994b. "Power/Gender: Social Relations in Theory and Practice." Pp. 317. London/Thousand Oaks/New Delhi: Sage Publications.

Rangan, H and M Gilmartin. 2002. "Gender, Traditional Authority, and the Politics of Rural Reform in South Africa " *Development and Change* 33:633-658.

Rao, Aruna, Mary B. Anderson, and Catherine Overholt. 1991. *Gender Analysis in Development Planning: A Case Book*. Sterling: Kumarian Press.

Ray, Isha. 2007. "Women, Water, and Development." *Annual Review of Environment & Resources* 32:421-449.

Regmi, Shibesh Chandra and Ben Fawcett. 1999. "Integrating Gender Needs into Drinking-Water Projects in Nepal." *Gender & Development* 7:62-72.

Reinharz, Shulamit. 1992. *Feminist Methods in Social Research*. Oxford: Oxford University Press.

Resurreccion, Bernadette P, Mary Jane Real, and Panadda Pantana. 2004. "Officialising Strategies: Participatory Processes and Gender in Thailand's Water Resources Sector." *Development in Practice* 14:521-533.

Rhodes, Rod A. W. 1996. "The New Governance: Governing without Government." *Political Studies* 44:652-667.

Riach, Kathleen. 2009. "Exploring Participant-Centred Reflexivity in the Research Interview." *Sociology* 43:356-370.

Ribot, Jesse C. and Nancy Lee Peluso. 2003. "A Theory of Access." *Rural Sociology* 68:153-181.

Rich, Adrienne. 1980. "Compulsory Heterosexuality and Lesbian Existence." *Signs* 5(4):631-660.

Risman, Barbara J. 2004. "Gender as a Social Structure: Theory wrestling with Activism", *Gender and Society* 18(4):429-450.

Ritzer, George. 2008. *Modern Sociological Theory*. New York, NY: McGraw-Hill.

Rogers, Peter and Alan Hall. 2003. "Effective Water Governance." Pp. 44, vol. No. 7. Stockholm, SE: Global Water Partnership.

Roy, Jessica and Ben Crow. 2004. "Gender Relations and Access to Water: What We Want to Know About Social Relations and Women's Time Allocation." Center for Global, International and Regional Studies Santa Cruz: UC.

Rubin, Herbert J. and Irene S. Rubin. 1995. *Qualitative Interviewing: The Art of Hearing Data*. Thousand Oaks, CA: Sage.

Rudaheranwa, Nichodemus, Lawrence Bategeka, and Margret Banga. 2003. "Beneficiaries of Water Service Delivery in Uganda." vol. Research Series No. 37. Kampala: Economic Policy and Research Centre (EPRC).

RWSN. 2010. "Myths of the Rural Water Supply Sector ", vol. RWSN Perspectives No. 4, edited by Committee, RWSN Executive Steering. St. Gillen: RWSN.

RWSN. 2012a. "Rural Water Supply Network (Rwsn) Strategy 2012 to 2014." St. Gillen: Rural Water Supply Network.

RWSN. 2012b. "Sustainable Groundwater Development: Use, Protect and Enhance." The Rural Water supply Network (RWSN), St. Gallen.

Rydhagen, Birgitta. 2002. "Feminist Sanitary Engineering as a Participatory Alternative in South Africa and Sweden." Blekinge Institute of Technology, Karlskrona.

Schlozman, Kay Lehman , Nancy Burns, Sidney Verba, and Jesse Donahue. 1995. "Gender and Citizen Participation: Is There a Different Voice?" *American Journal of Political Science* 39:267-293.

Schneiderman, Jill S. and Rhoda Reddock. 2004. "Water, Women and Community in Trinidad, West Indies." *Natural Resources Forum*:171-247.

Schreiner, B., N. Mohapi, and B. van Koppen. 2004. "Washing Away Poverty: Water, Democracy and Gendered Poverty Eradication in South Africa." *Natural Resources Forum* 28:171-178.

Schrijvers, J. . 1995. "Participation and Power: A Transformative Feminist Research Perspective." in *Power and Participatory Development*, edited by Nelson, N and S Wright. London: Routledge.

Schulman, Bonnie Rose. 2008. "Gender, Water and Development." *Journal of International Affairs* 61:296-297.

Schutt, Russell K. 2004. *Investigating the Social World: The Process and Practice of Research*. Thousand Oaks, California: Pine Forge Press.

Schutt, Russell K. 2006. *Investigating the Social World: The Process and Practice of Research*. Thousand Oaks, California: Pine Forge Press.

Scott, Richard. 2001. *Institutions and Organisations*. London: Sage.

Seager, Joni. 2010. "Gender and Water: Good Rhetoric, but It Doesn't "Count"." *Geoforum* 41:1-3.

Seeley, Janet, Meenakshi Batra, and Madhu Sarin. 2000. "Women's Participation in Watershed Development in India." *Gatekeeper Series*. London: Sustainable Agriculture and Rural Livelihoods Programme.

Shah, Anil. 2002. "Women, Water, Irrigation: Respecting Women's Priorities." *Economic and Political Weekly* 37:4413-4420.

Shiva, Vandana. 2000. *Water Wars: Privatisation, Pollution and Profit*. Cambridge: South End Press.

Silverman, David. 2002. *Doing Qualitative Research: A Practical Handbook*. London: Sage Publications Ltd.

Sim, Julius 1998. "Collecting and Analysing Qualitative Data: Issues Raised by the Focus Group." *Journal of Advanced Nursing* 28 345-352.

Singh, Nandita. 2006. "The Changing Role of Women in Water Management: Myths and Realities." *Wagadu* 3:94-113.

Singh, Nandita. 2008. "Equitable Gender Participation in Local Water Governance: An Insight into Institutional Paradoxes." *Water Resources Management* 22:925-942.

Slaymaker, Tom and Peter Newborne. 2007. "Water Rights for Water Governance: Opportunities and Challenges of Regulation in Developing Countries." in *'Water Governance: Challenging the Consensus'*. Bradford: Bradford Centre for International Development.

Sleeper, Ralph W. 2001. *The Necessity of Pragmatism:John Dewey's Conception of Philosophy*. Urbana: University of Illinois Press.

Smart, Barry. 2004. "Michel Foucault." in *Key Sociologists*, edited by Hamilton, Peter. London, New York: Taylor&Francis.

Socio-Economic Data Centre, Ltd. 2001. "Study of the Operation and Maintenance of Rural Water Facilities in Uganda: Final Consultancy Report " Ministry of Water Lands and Environment, MWLE and Directorate of Water Development, DWD, Kampala.

Sodhi, Navjot, Priya Davidar, and Madhu Rao. 2010. "Empowering Women Facilitates Conservation." *Biological Conservation* 143:1035-1036.

Sorenson, Susan B., Christiaan Morssink, and Paola Abril Campos. 2011. "Safe Access to Safe Water in Low Income Countries: Water Fetching in Current Times." *Social Science & Medicine* 72:1522-1526.

Steinfeld, Henning, Gerber Pierre, Wassenaar Tom, Castel Vincent, Rosales Mauricio, and de Haar Cees. 2006. *Livestock's Long Shadow - Environmental Issues and Options*. Rome: Food and Agriculture Organization (FAO).

Stewart, Angus. 2001. *Theories of Power and Domination: The Politics of Empowerment in Late Modernity*. London: Sage.

Stewart, D.W. and P.N. Shamdasani. 1990. *Focus Groups: Theory and Practice*. Sage: Newbury Park, California.

Stoker, Gerry. 1997. "Local Political Participation." Pp. 157-196 in *New Perspectives on Local Governance: Reviewing the Research Evidence*, edited by Hambleton, Robin, H. David, and C. Skelcher. York: Joseph Rowntree Foundation.

Stoker, Gerry. 1998. "Governance as Theory: Five Propositions." *International Social Science Journal* 50:17-28.

Sugita, Elli W. 2006. "Increasing Quantity of Water: Perspectives from Rural Households in Uganda " *Water Policy* 8:529–537.

Sultana, Farhana. 2009. "Community and Participation in Water Resources Management: Gendering and Naturing Development Debates from Bangladesh." *Transactions of the Institute of British Geographers* 34:346-363.

Susman, Gerrard, S. 1983. *Action Research: A Sociotechnical Systems Perspective*. London: Sage.

Symington, A. 2002. "A Rights-Based Approach to Development" Toronto: Associations for Women's Rights in Development (AWID).

Tashakkori, Abbas and Charles Teddlie. 2003. "Handbook of Mixed Methods in Social and Behavioural Sciences." Thousand Oaks: CA: Sage.

Taylor, Barry N. 1995. *Guide for the Use of the International System of Units (Si)*. Darby, Pennsylvania (PA): Diane Publishing Co.

Thaxton, Melissa. 2003. "Water: Gender Makes the Difference." IUCN, Gland, Switzerland.

Thompson, John, Sandy Cairncross, I Porras, J Tumwine, M Mujwahuzi, Katui-Katua M, Johnstone M, and L Wood. 2001. "Drawers of Water Ii: 30 Years of Change in Domestic Water Use and Environmental Health in East Africa " in *Bulletin of the World Health Organization*. London: International Institute for Environment and Development.

Tong, Rosemarie. 1998. *Feminist Thought: A More Comprehensive Introduction*. Colorado: Westview Press.

Tong, Rosemarie. 2008. *Feminist Thought: A More Comprehensive Introduction* Colorado: Westview Press.

Townsley, Phillip G. 1993. "Training of Rapid Appraisal Teams, Notes for Trainers." Rome: Food and Agricultural Organisation.

Tukai, Rehema. 2005. "Gender and Access in Pastoral Communities: Re-Evaluating Community Participation and Gender Empowerment." Pp. 7 in *ESRC Seminar on Access, Poverty and Social Exclusion, March 1, 2005*. Overseas Development Institute, London.

UBOS. 2005. "Uganda National Population and Housing Census: Final Report ". Entebbe: Uganda National Bureau of Statistics.

UBOS. 2006a. "Uganda Demographic and Health Survey." Uganda National Bureau of Statistics, Entebbe.

UBOS. 2006b. "2002 Uganda Population and Housing Census: Analytical Report." Uganda National Bureau Of Statistics, Entebbe.

UBOS. 2010. "Uganda National Household Survey, 2009-2010: Socio -economic Module." Uganda National Bureau Of Statistics, Entebbe.

UN-Water. 2005a. "Information Brochure on 'Water for Life Decade (2005-2015)'." edited by Information, United Nations Department of Public. New York: UN.

UN-Water. 2005b. "'Water for Life Decade (2005-2015)'." UN, New York.

UN-Water and WWAP. 2006. "Uganda National Water Development Report." United Nations, New York.

UN. 2000. "Millenium Declaration." in *United Nations*. New York: United Nations Millenium Declaration.

UN. 2003. "Water for People, Water for Life. The United Nations World Water Development Report." United Nations, New York.

UN. 2004. "Women 2000 and Beyond: Women and Water." United Nations Division for the Advancement of Women, New YorK.

UN. 2004a. "Women 2000 and Beyond: Women and Water,." United Nations Division for the Advancement of Women, New YorK.

UN. 2011. "Millennium Development Goals Report, 2011." New York: United Nations.

UN Human Rights Council 2010. "Resolution Adopted by the Human Rights Council 15/9: Human Rights and Access to Safe Drinking Water and Sanitation." New York: United Nations General Assembly.

UNDP. 2006. "Beyond Scarcity: Power, Poverty and the Global Water Crisis. Human Development Report 2006." United Nations Development Programme, New York.

Upadhyay, B. 2005. "Women and Natural Resource Management: Illustrations from India and Nepal." *Natural Resources Forum* 29:224-232.

UWASNET. 2009. "NGO Group Performance in the Ugandan Water and Sanitation Sector: Report for the Financial Year 2008/9." Kampala.

Van Der Zaag, Pieter. 2006. "Water's Vulnerable Value in Africa." UNESCO-IHE Institute for Water Education, University of Twente, Enschede, the Netherlands, Delft University of Technology, Delft, the Netherlands, Delft, the Netherlands.

van Koppen, Barbara , Penning de Vries, Stef Smits, Patrick Moriarty, Monique Mikhail, and Eline Boelee. 2009. "Climbing the Water Ladder: Multiple-Use Water Services for Poverty Reduction " IRC International Water and Sanitation Centre, International Water Management Institute Hague.

Vaughn, S. , J.S. Schumm, and J. Sinagub. 1996. *Focus Group Interviews in Education and Psychology*. Thousand Oaks, California: Sage.

Villanueva, Kathelyn Paredes. 2011. "Gender and Water Resource Management." in *Forests and Gender*, edited by Aguilar, Lawrence , Daniel D. M. P. Shaw, and Andrea Quesada-Aguilar. Gland; New York: IUCN and WEDO.

Visvanathan, N., L. Duggan, L. Nisonoff, and N. Wiegersma. 1997. "The Women, Gender and Development Reader." London: Zed books Ltd.

Walby, Sylvia. 1990. *Theorising Patriarchy*. Oxford: Blackwell.

Walter, N. 1998. *The New Feminism*. London: Little, Brown.

WaterAid. 2009. "Seen but Not Heard? A Review of the Effectiveness of Gender Approaches in Water and Sanitation." WaterAid, Nepal.

WBCSD. 2009. "Water: Facts and Trends." World Business Council for Sustainable Development, Geneva.

Weber, Max. 1978. "Economy and Society: An Outline of Interpretive Sociology ". Berkeley: University of California Press.

Weiss, Thomas G. 2000. "Governance, Good Governance and Global Governance: Conceptual and Actual Challenges." *Third World Quarterly* 21:795-814.

Wharton, Amy S. 2005. *The Sociology of Gender: An Introduction to Theory and Research*. Malden, Massachusettes: Blackwell Publishing Ltd.

WHIRL. 2001. "Promoting Access of the Poor to Sustainable Water Supplies for Domestic and Productive Uses in Areas of Water Scarcity : Inception Report." Water, Households and Rural Livelihoods, Kent, ME.

White, Gilbert F., David J. Bradley, and Anne U. White. 1972. *Drawers of Water: Domestic Water Use in East Africa*. Chicago: The University of Chicago Press.

White, Sarah C. 1996. "Depoliticising Development: The Uses and Abuses of Participation." *Development in Practice* 6:6-15.

Whittington, Dale , Jennifer Davis, Linda Prokopy, Kristin Komives, Richard Thorsten Heather Lukacs, Alexander Bakalian, and Wendy Wakeman. 2009. "How Well Is the Demand-Driven, Community Management Model for Rural Water Supply Systems Doing? Evidence from Bolivia, Peru and Ghana." *Water Policy* 11:696-718.

Whittington, Dale, Xinming Mu, and Robert Roche. 1989. "Calculating the Value of Time Spent Collecting Water: Some Estimates for Ukunda, Kenya." World Bank, Washington, D.C.

WHO. 2003. "The Right to Water." Geneva.

WHO and UNICEF. 2000. "Global Water Supply and Sanitation Assessment Report." World Health Organisation and United Nations Childrens' Emergency Fund - Joint Monitoring Programme for Water Supply and Sanitation, Geneva.

WHO and UNICEF. 2010a. "Progress on Sanitation and Drinking Water:2010 Update." World Health Organisation and United Nations Childrens' Emergency Fund - Joint Monitoring Programme for Water Supply and Sanitation, Geneva.

WHO and UNICEF. 2010b. "Progress on Sanitation and Drinking Water: 2010 Update." World Health Organisation and United Nations Childrens' Emergency Fund - Joint Monitoring Programme for Water Supply and Sanitation, Geneva.

WHO and UNICEF. 2012. "Progress on Sanitation and Drinking Water: 2012 Update." World Health Organisation and United Nations Childrens' Emergency Fund - Joint Monitoring Programme for Water Supply and Sanitation, Geneva.

Wilkinson, Sue. 1998. "Focus Groups in Feminist Research: Power, Interaction, and the Co-Construction of Meaning." *Womens Studies International Forum* 21:111-125.

Wilkinson, Sue. 1999. "Focus Groups - A Feminist Method." *Psychology of Women Quarterly* 23:221-244.

Wolf, Diane L. 1996. "Situating Feminist Dilemmas in Fieldwork." Pp. 55 in *Feminist Dilemmas in Fieldwork*, edited by Wolf, Diane L. . Boulder: Westview Press.

Wolf, Naomi. 1993. *Fire with Fire: The New Female Power and How It Will Change the 21st Century*. London: Chatto and Windus.

Yin, Robert K. 1994. *Case Study Research: Design and Methods*. Beverly Hills, CA: Sage Publishing.

Young, Iris Marion. 1990. *Justice and the Politics of Difference*. Princeton, New Jersey: Princeton University Press.

Young, Iris Marion. 2000. *Inclusion and Democracy*. Oxford Oxford University Press.

Zetland, David 2010. "Water Rights and Human Rights:The Poor Will Not Need Our Charity If We Need Their Water." *Global Water Magazine*.

Zwarteveen, Margreet and N. Neupane. 1996. "Free Riders or Victims: Women's Nonparticipation in Irrigation Management in Nepal's Chhattis Mauja Irrigation Scheme." International Irrigation Management Institute, Colombo.

Zwarteveen, Margreet Z. 1997. "Water: From Basic Need to Commodity: A Discussion on Gender and Water Rights in the Context Of." *World Development* 25:1335.

Zwarteveen, Margreet Z., Bhushan Pranita Udas, and Juana Vera Delgado. 2010. "Gendered Dynamics of Participation in Water Management in Nepal and Peru: Revisiting the Linkages between Membership and Power." in *Social Participation in Water Governance and Management: Critical and Global Perspectives*, edited by Berry, Kate A. and Eric Mollard. London: Earthscan.