

**COMMUNITY PARTICIPATION AND WATER PAYMENT COMPLIANCE:**

**A CASE STUDY OF KITGUM TOWN- UGANDA**

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**RESEARCH REPORT**

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## DECLARATION

I declare that this Research Report is my own, unaided work under the supervision of my supervisors. It has not been submitted before for any other Masters, part of a Masters or examination at this University.

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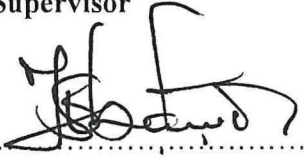


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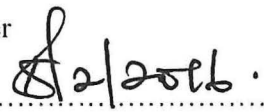
## APPROVAL

This is to certify that this Research Report has been submitted for examination with our approvals as University Supervisors.

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## DEDICATION

I dedicate this dissertation to; my late dad Deogratius Kawuki, my loving mom Mrs. Rosemary Nabaweesi Kawuki, my dear sisters and brothers for the love, care and encouragement you have given me since childhood. To all my nieces and nephews- Deogracious, Richard, Resty, Rebecca, Raymond, Rosemary, Geri, Grace, Ethan, Denis, Doreen, Dauphine whom I love so much- and to my sisters and brother-in-law – Immaculate Zawedde, late Beatrice Namirimu and Dr. Gerald Kayingo. To my dear Friends, Ali Balunya, Robinah Nabaloga, Catherine Nanyonga, Maria Najuma, Scholastica Namenya, Ronny Mulongo, Ronald Nyakana, and David Karubanga. Thanks for supporting me during my school and guiding me in life to reach this far.

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## List of Acronyms

|      |   |
|------|---|
| CBM  | Community Based Management                                    |
| CSO  | Civil Society Organizations                                   |
| DWD  | Directorate of Water Development                              |
| DWRM | Directorate of Water Resources Management                     |
| EPA  | Environmental Protection Agency                               |
| GGAP | Good Governance Action Plan                                   |
| GGWG | Good Governance Working Group                                 |
| GIZ  | Deutsche Gesellschaft fuer Internationale Zusammenarbeit GmbH |
| MDG  | Millennium Development Goals                                  |
| MWE  | Ministry of Water and Environment                             |
| NCC  | Norwich City Council  |
| NWSC | National Water and Sewerage Corporation                       |
| PWO  | Private Water Operators                                       |
| RDC  | Resident District Commissioner                                |
| SERG | Social-Economic Research Group                                |
| SSWM | Sustainable Sanitation and Water Management                   |
| UBOS | Uganda Bureau of Statistics                                   |
| UNDP | United Nations Development Programme                          |
| WAP  | Water Action Plans  |
| WIN  | Water Integrity Network                                       |
| WPC  | Water Policy Committee  |
| WSP  | Water and Sanitation Program                                  |

## ABSTRACT

This study examined the influence of community participation in planning, pricing and monitoring of water services on compliance to payment for water services taking Kitgum Town as a case study area. 54 members of the Business Community Association in Kitgum were interviewed on their level of participation in water service provision and their compliance to payment for water. The views of key informants were also consulted in an in-depth interview with the Commercial Officer of NWSC-Kitgum area and the chairperson of LCIII. A Focused Group Discussion with other political representatives in the town was also conducted. Frequency analysis was used to explore the extent to which the community participates in planning, pricing and monitoring of water services and linear regression was used to establish the influence of community participation in planning, pricing and monitoring of water services on compliance to payment for these services.

The findings in a multiple regression summary implied a positive relationship with the overall correlation (linear relationship) between compliance to payment (dependent variable) and community participation being  $r=0.56$ , which is consistent with recent research on community participation in water services (Mugumya, 2013). This means that community participation in water services planning, pricing and monitoring can significantly increase their compliance to water services payment. The findings further revealed that the current community participation in water services planning, pricing and monitoring in Kitgum is not very inclusive but rather taken to be only perfunctory. Representatives do not have the information and the needed tools to make contributions that represent the interested of the community.

The study recommended that community participation should be expanded to include most of the sections of the community with programs to empower the community on effective participation and engagement techniques and written, effectively distributed guidelines. There is need for regular community meetings on the water services and use of a far-reaching forum to communicate on meter prices, changes in water tariffs, and monitoring tools.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Access to water is a prerequisite to improved health, livelihoods and overall well-being of men, women and children, particularly among the poor (Asaba, Fagan, Kabonesa, & Mugumya, 2014). Good governance is essential in increasing access to and quality of water, combined with citizen empowerment in the planning, budgeting and monitoring of water and sanitation service delivery (Mwebaza, 2010), and the most persistent obstacles for the sustainable management of water resources lie in the realm of water governance (Pahl-Wostl, Lebel, Knieper, & Nikitina, 2012). These persistent obstacles are largely our own making. They have resulted not from the natural limitations of the water supply or lack of financing and appropriate technologies, even though these are important factors, but rather from profound failures in water governance. Crow and Sultana (2002) are quoted by the International Journal of Innovative Research and Development (IJIRD)(2014) demonstrating that community ability to effectively manage its water resources and enable easy access to water services is being compromised by men and women, who misuse water and land resources, finances, industries and other firms as well as their own governance.

Calls for increased participation in decision-making have gathered momentum in the past few decades, spawning a wealth of theoretical and practical literature and influencing approaches to policy-making by various levels of government (Social-Economic Research Group (SERG), 2007). Participatory policy making implies the empowerment of stakeholders to take part in the whole cycle of the policy process: formulation, implementation, monitoring and evaluation of policy (McGee & Loomis, 2008). In this case community participation would imply involving the community at planning, pricing and monitoring of water services. Recent thinking about citizen participation looks

at the concept of participation from a perspective that acknowledges the possibility of citizens taking autonomous action and creating their own opportunities for participation. This study examined the effect of community participation on compliance to payment for water services. While it is possible to participate passively, this study focused on direct participation by communities.

Chapter one of this research report outlines the historical contextual background to community participation and compliance to payment for water services, the statement of the problem, the objective and significance of the study, and the scope of the study. Chapter two details and critically reviews the different views of other researchers and writers on community participation and compliance to water services payment. By doing so, I identified the gaps and the support in the previous research works. Chapter three of this report is the methodology where I explained the research plan, methods and methodologies that were used during the study. I explained the findings in chapter four and provide for recommendations of the study in chapter five.

## **1.2 Theoretical background**

The study was guided by International Association for Public Participation (IAP2) (2007) participation levels theory which looks at the concept of participation from a number of levels ranging from informing to empowerment. According to IAP2 (2007), “informing” is the first level of participation and entails merely telling people what is planned. The second level is “consultation” which involves the community offering some options, and listening to feedback, but not allowing new ideas. The third level is “involvement” which involves an element of deciding together and encouraging additional options and ideas, and providing opportunities for joint decision- making from the community. “Collaboration” is the fourth level of participation according to IAP2. It calls for acting together; not only do different interests decide together on what is best option; they form a partnership to carry it out. The last level is “empowerment” where local groups or organizations are offered funds, advice or other support to develop their own agendas within guidelines.

### **1.3 Contextual Background to the study**

While local and national institutions have the most visible role to play in governing the water sector, it is the sector's underlying policies, legislation and regulations that provide the foundation for its overall governance (Jacobson, Mutono, Nielsen, O'Leary & Rop, 2010). The Water Supply and Sanitation sector in Uganda is comprised of a number of institutions and several participate directly in the planning, pricing and monitoring of water and sanitation services at national, district and community levels. National Water and Sewerage Corporation (NWSC), which is the largest water utility in Uganda (Jacobson et.al, 2010) does the planning, pricing and monitoring of water services in its areas of jurisdiction and ensures that people have water. NWSC is a utility parastatal 100% owned by the Government of Uganda, established in 1972 under decree No: 34. The mandate of the Corporation as defined in the National Water and Sewerage Corporation Statute of 1995, Section 5 (1), is to operate and provide water and sewerage services in areas entrusted to it, on a sound, commercial and viable basis. NWSC is currently operating and managing supply of water in 107 large towns of Uganda including Kitgum Town (NWSC website).

The utility collects its revenue through administering of the water tariff. Although tariffs are often set by a regulatory body for the appropriate catchment, purification and distribution and the subsequent collection, treatment and discharge of wastewater and some elements to address poverty in some countries, (Sustainable Sanitation and Water Management (SSWM), 2010) in Uganda NWSC sets a uniform price for all its areas of jurisdiction but with no direct involvement or participation of the final customer to appreciate the setting of the price. NWSC supplies water to the people of Kitgum Town at a unit price based on a category as stipulated in table 1 here below.

**Table 1: NWSC water pricing for 2013 and 2014**

| <b>Category</b>                   | <b>Unit Price 2013</b> | <b>Unit Price 2014</b> |
|-----------------------------------|------------------------|------------------------|
| Public standpipes                 | 1,236                  | 1,323                  |
| Residential                       | 1,912                  | 2,046                  |
| Institutional/Government          | 2,353                  | 2,518                  |
| <b>Industrial/Commercial</b>      |                        |                        |
| First 500 cubic meters per month  | 2, 887                 | 3,089                  |
| 501 - 1500 cubic meters per month | 2,887                  | 3,089                  |
| Over 1500 cubic meters per month  | 2,307                  | 2,468                  |

*Source: NWSC tariff structure (MWE, 2014)*

As provided by Ripp (2010) that a water utility provides service to different classes of customers who have different water use and demand patterns, NWSC charges different tariffs to different categories of customers. A constant volumetric tariff is charged to cater for conservation, as higher consumption leads to higher water bill. Table 1 shows NWSC water pricing for the range of tariffs for each category for 2013 and 2014, categorized into Public standpipes, Residential, Institutional/Government, and Industrial/Commercial. According to the Director of Engineering Services NWSC, Eng. Alex Gisagara, the commercial connections are further categorized by the volumes of consumption to appreciate the economies of scale for industries that consume over 1500m<sup>3</sup> per month (NTV talk show, 25.05.15) and the Public standpipes are charged a lower tariff per unit to cater for the poor who cannot afford an own connection. Similarly the NWSC tariff guide, 2014 states that;

*“At NWSC, we are aware that different customers have different needs and are bound to use our water and services differently. We therefore offer a range of tariffs made-to-order to each customer's activity, be it commercial, institutional or domestic”.*

Kitgum Town Council is located in Kitgum District with a population of around 44,604 people (Uganda Bureau of Statistics (UBOS), 2014). NWSC Kitgum area has a total of 2,986 water connections of which 2,667 are active while the balance of 181 connections are inactive accounts (i.e. disconnected from service either due to non-payment or technical faults) (NWSC Kitgum Area report, 2015). The town is made up of 11 parishes, namely; Guu A, Guu B, Pandwong, Pongdwong, Town parish, Alango, Westland A, Westland B, Pager A, Pager B, and Green Land parish. The population per parish is estimated as per table 2 here below.

**Table 2: Kitgum Town Council Population per parish**

| Parish | Guu A | Guu B | Pandwong | Pongdwong | Town parish | Alango | Westland A | Westland B | Pager A | Pager B | Green Land | Total  |
|--------|-------|-------|----------|-----------|-------------|--------|------------|------------|---------|---------|------------|--------|
| Popn.  | 2720  | 3704  | 7664     | 3466      | 2041        | 4947   | 3228       | 4491       | 2326    | 4538    | 5339       | 44,604 |
| H/H    | 1591  | 971   | 1606     |           |             | 890    | 692        | 1714       | 1536    | 1053    |            |        |
| Conn.  | 167   | 278   | 157      | 101       | 427         | 226    | 257        | 356        | 328     | 299     | 390        | 2,986  |

*Source: Kitgum Town Council and NWSC Kitgum Area report, 2015*

Key: Conn= Number of connections, H/H = Number of households.

The people of Kitgum Town are not aware of the real cost of providing water services because they have been historically heavily subsidized from governments and partly because they are not involved in the revenue planning, pricing and monitoring process. Water is a social good and was considered cheap and abundant resource (Gooch, 2013) however, with population growth and much larger communities requiring access to water services, the availability of fresh water is decreasing dramatically in many regions of the world (SSWM, 2010; Mathenge et al., 2014). Concepts of participation have widened to include not only the rural poor but also other stakeholders and sectors of civil society (Robb, 2002). Direct public participation in the decision-making processes of governmental organizations, rather than representation solely through elected politicians, has become an increasingly influential ideal among western societies (SERG 2007). In China, for

example, new institutions are being constructed regarding public participation at tariff formulation (Zhong&Mol, 2008). Lesotho has also tried to put in place a community forum where water users are called to participate in the planning and budgeting of water revenues. During this forum, the community questions the input costs and all expenses attached to the water tariff and the regulator is put to task to explain the details of the proposed tariff policy.

Community participation has been in existence for quite long (Mugumya, 2013). The reforms in water tariff management relate not only to tariffs, but also to the decision-making on tariffs. Increased participation in policy making has been advocated around the world not only for its democratic properties but also for its potential to contribute to a more effective, efficient and accountable systems of governance (Jacobson et al., 2010). Zhong and Mol (2008) showed that in the late 1990s China started to expand its market economic reform to the public sector, such as water services. This reform led to major changes in urban water management, including water tariff management where the water tariff decision-making seems to move away from China's conventional mode of highly centralized and bureaucratic policy- and decision-making. The demand for greater consultation and more transparent and accountable decisions can be attributed to a decline in public confidence in political processes and a reduced trust in the policy makers (Richardson &Razzaque 2006), the growth of human rights in legal and political systems which has also heightened people's expectations of participation in policy-making (Razzaque, 2009) and the prevailing concern of the international community for 'good governance'.

#### **1.4 Statement of the problem**

Whereas community participation is widely advocated for, there seems to be no involvement of the community in the planning, pricing and monitoring of water services in Kitgum Town and yet they have the ability to pay for these services. This was evidenced by the complaint from the business community association to the Resident District Commissioner on the 15<sup>th</sup> of May 2014, complaining

of failure of NWSC to involve them in setting the tariff policy (Minute book, Office of the Resident District Commissioner's (RDC) 15<sup>th</sup> May, 2014). I was concerned by this complain to examine the influence of community participation in planning, pricing and monitoring of water services on the compliance to payment for water services taking Kitgum Town as a case study area.

### **1.5 General objective of the study**

The study intended to examine the effect of community participation and water payment compliance taking a case study of Kitgum town

### **1.6 Specific objectives**

The specific objectives of the study were:

1. To determine the effect of community participation in water services planning on water payment compliance.
2. To establish the effect of community involvement in pricing for water services on the water payment compliance.
3. To examine the effect of community participation in water services monitoring on the water payment compliance.

### **1.7 Research questions**

1. To what extent does community participation in water services planning influence the compliance to payment for water services in Kitgum Town Area?
2. To what extent does community participation in pricing for water services contribute to the compliance to payment for water services in Kitgum Town Area?
3. What is the nature of the relationship between community participation in water services' monitoring and compliance to payment for water services in Kitgum Town Area?

## 1.8 Scope of the study

**Content scope:** The study was limited to community involvement as a principle of good governance in promoting compliance to payment for water services in the urban water subsector.

**Geographical scope:** The research was limited to the town area parish in Kitgum Town; the business hub accommodating the bigger percentage of the business community. Kitgum Town is approximately 435km from Kampala, in the North-Western part of the country.

**Time scope:** The study concerned its self with the period from January to July 2015. This is the period that had very fluctuating revenue collection efficiency.

## 1.9 Significance of the study

This study could be significant to NWSC and MWE policy unit in developing a robust community engagement process for NWSC in the future and setting appropriate revenue collection structure and processes. The study may equally be useful to the policy department of Kyambogo University in determining and developing effective policies especially that need community participation. The research may be useful to researchers and scholars when conducting further research, politicians and civil society organizations in analyzing the involvement of stakeholders at decision making processes, and the general public at large. The study findings are expected to make a contribution in the area of revenue performance management especially in the water sector.

### 1.10 Definition of terms

**Community** is the social and economic infrastructure and relationships among people who live in the same geographic area, and able to be identified with the remit of the local authority to plan, make policy and deliver services impacting on that defined area.

**Community Participation** is the direct inclusion of persons or groups who are directly or indirectly affected by the water service provision as well as those who may have interests in the service

provision and the ability to influence its outcomes either positively or negatively. The term can also refer to an approach in which all stakeholders, and in particular the envisaged beneficiaries, are part of the decision process.

**Compliance to payment for water services** is the action of complying with rules, norms, guidelines and regulation when paying for water services.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

The impetus for a more participatory approach to governance stems from challenges to conventional forms of political representation and accountability (SERG, 2007). Community participation has gone from being a radical concept to becoming widely accepted, with the use of non-participatory methods now being considered “illegal, ineffective and undemocratic” (Bulkeley&Mol, 2003) cited by Yau Yung, 2012). As such, participation in decision-making has come to be perceived as a democratic right (SERG, 2007). Many scholars, researchers and practitioners have commented on community participation (Mugumya, 2013; Gooch &Stalnacke, 2013; Bijlsma et.al, 2011; SERG, 2007; Robb, 2002) and on payment compliancy for water although little is said on how the latter affects the former. Some have argued that perceptions of how local people interact with the environment have evolved substantially over recent years. Most environmental problems are complex, uncertain, extend over large spatial and temporal scales and may be irreversible. Equally, other stakeholders from various areas are demanding for involvement in tariff setting (Gooch &Stalnacke, 2013). Therefore, environmental decision-making should be informed by a plurality of perspectives, to be able to respond to changing circumstances and encourage civic responsibility and individual behavioural change. SERG (2007) upholds that participatory approaches assist with conflict resolution, which often underpins environmental management dilemmas, through seeking a shared definition of the problem and a collective solution. Gooch and Stalnacke(2013) further analyzed why ‘science, policy and stakeholder involvement integration’ is important in water management and the methods that can be employed to its effectiveness.

Involving people varies from informing them of a decision, through to giving citizens full control (SERG, 2007). Yet, involving everybody at policy formulation makes it a slow-bulky process where

policies become absolute at their inception time (Mugumya, 2013). Consultation fatigue arises as people are approached more and more often to participate, but perceive little return on the time and energy they give up to do so. Community groups, for example, receive ever-increasing numbers of requests to take part in consultations but can only do so in their own time and often at their own expense (SERG, 2007). Consultation fatigue may be due to the sheer number of requests many people get to become involved, the poor quality of processes in which they do become involved, or the apparent lack of impact on actual policy decisions.

Having benevolent dictators to plan, price and monitor the water revenue for the population would equally provide options to revenue management, in the shortest possible manner. But how acceptable would such options be! Whether involving the poor majority in the water services planning, pricing and monitoring process influences the revenue collection performance for water is still a question for debate. In this chapter, I critically analyzed the works of previous researchers and writers on community participation and compliance to payment for water services. The literature in this chapter is presented in theoretical review and conceptual framework, arranged in a thematic manner described and analyzed in themes presented by research objectives.

## **2.2 Theoretical review**

This study is underpinned by IAP2 participation level theory which they propounded in 2007. IAP2 (2007) observed that participation varies in type, level of intensity and frequency and suggested some level of engagement as described here under:

**Inform:** This entails merely telling people what is planned. It can take the form of a meeting, public notice, website, letter, exhibition, newspaper supplements. In some circumstances, using an approach further down Arnstein's ladder, such as simply informing people of a decision made without their involvement, may be more appropriate (SERG, 2007).

**Consultation:** This involves the community offering some options, and listening to feedback, but not allowing new ideas. Local community group, community information and feedback session, focus group, meeting, questionnaire, website, community needs analysis, models, roadshow, street stall can be used.

**Involvement:** This involves an element of deciding together and encouraging additional options and ideas, and providing opportunities for joint decision- making from the community. This can take a form of planning for Real type event, photo survey, facilitation, focus meeting, briefing workshop, choice catalogues, website, interactive displays, mapping, models, and review sessions.

**Collaboration:** Acting together: not only do different interests decide together on what is best, they form a partnership to carry it out. Collaboration can be in form of a briefing workshop, planning forum, design game/ workshops, interactive displays, photo survey, mapping, task force and user groups

**Empowerment:** Also referred to as community control and is involved with supporting independent community interests. It can be through planning day, prioritizing, process planning, task force, user groups. Under empowerment, local groups or organizations are offered funds, advice or other support to develop their own agendas within guidelines.

## **Other Theories of Community Participation**

### **Community Leadership theory**

The models of “citizen leadership,” “technocratic expert,” and “bureaucratic indifference” provide different theoretical perspectives to think about how community participation in planning, pricing and monitoring affects water revenue in regard to involving citizens in the water service processes. As public problems become highly sophisticated in modern society, policy processes are increasingly dominated by professional experts. Such technocratic dominance, however, is likely to hamper citizen participation because administrative decision-making based on expertise and

professionalism may leave little room for participatory processes (Zhang & Yang, 2009). Community leadership is distinctive in that leaders often do not have formal training or authority to dictate and facilitate change. Instead, community leaders must rely on informal networks of diverse citizens, each with a unique local capacity, as the basis for change (Brennan, 2012).

### **Community informatics Theory**

As technology has evolved, converged, and diffused, the binary concept of the digital divide has revealed itself as containing multiple digital inequalities bearing deeper analysis (Williams & Durrance, 2009). Community informatics is an emerging field that encompasses both study and practice. Community informatics (CI), also known as community networking, electronic community networking, community-based technologies, community technology or grassroots computing refers to an emerging field of investigation and practice concerned with information and communication technology (ICT) in relation to communities and their social, cultural, service development, economic and other dimensions (Wikipedia). Community Informatics (CI) is the application of information and communications technologies (ICTs) to enable community processes and the achievement of community objectives. It can be described as navigating the interaction between transformation as expressed in information technology and continuity as expressed in a local, historical community. Community informatics looks at the community. The concept of community and the tensions within that concept, set in the context of the nascent information society, are the basis for the core ideas of community informatics. Community informatics practitioners can be found in public libraries, community technology centers, community networks, and in an increasing range of community and economic development activities, employed in the private, public, or nonprofit sectors. Community Informatics continues to provide a place where academics and practitioners can meet and discuss issues of common interest—assess strategies, develop models, explore controversies. As the area of community based technology applications grows, one can

expect an increasing interest in and formal institutional attention to Community Informatics as a discipline.

### **Social Capital Theory**

Social capital theory encompasses the notion that our social relationships are productive in nature; that is, 'capital'. Garson (2006) defined social capital as those resources inherent in social relations which facilitate collective action. Social capital resources include trust, norms, and networks of association representing any group which gathers consistently for a common purpose. The illustrative hypothesis that 'the greater the social capital, the easier to mobilize support for problem solutions' has been hypothesized although not all authors can subscribe to it. A norm of a culture high in social capital is reciprocity, which encourages bargaining, compromise, and pluralistic politics. Another norm is belief in the equality of citizens, which encourages the formation of cross-cutting groups.

### **Community consultation theory**

Consultation as such does not contain within it the opportunity for ongoing dialogue either between the responsible body and individuals or communities, or amongst individuals and communities themselves. The purpose is to provide the authority with a channel for obtaining information from the community relevant to the proposal it is considering - information may be additional and relevant knowledge, it may be community attitudes. Whatever it is, authority understand that they are not obliged to do any more with the input from community consultation than consider the material put forward in submissions, with an open mind. Conventional consultation is very significantly rule-bound (McKinlay, 2009). The obligation to consult is specified in statute, and the minimum requirements for compliance are the subject of case law and this contributes to much of the expressed frustration with consultation. The fact that there may be no opportunity to comment on what the question should be is simply a function of a statutorily defined consultation process whose starting point is the publication of a proposal which the authority has already developed.

Consultation is also increasingly seen as offering just the one opportunity for the citizen or community to put forward information or views relating to a proposal.

Traditional consultation methods tend to be skewed to favour those who are sufficiently literate, articulate, confident, aware and interested to put their own views forward. This can result in a very narrow section of society participating in the planning process. Consultation is often undertaken at the end of the design process, with no clear guidance to those consulted (NCC, 2010). Consulting stakeholder groups can help build support for utility goals and specific infrastructure decisions (EPA, 2012). Citizen desire for more involvement may be channeled through such mediating groups as nonprofits, elected officials, and business leaders, especially in a pluralistic society that is based on group politics. Individual citizens push for greater involvement when their direct interests are at stake. However, individual citizens often lack expertise and feel powerless when facing bureaucratic regulations and government hierarchies (Yang and Callahan 2007).

### **Community Engagement Theory**

Development efforts to promote participation, in this perspective, focus on creating spaces for participation, whereby "citizens gain meaningful opportunities to exercise voice and hold to account those who invite them to participate". In contrast to community consultation theory, here are no explicit statutory or legal rules constraining or defining 'community engagement'. Rather there is a very wide range of evolving practices and understandings, all of which share a sense that something different is going on in respect of the 'decision right'. Rather than the responsible body reserving the sole right to take whatever decisions are involved, there is a sense that the decision right is to a greater or lesser extent being shared (McKinlay, 2009). Community engagement in its broadest sense may be seen as part of a reassertion of local democracy not as a form of participation within governance, but as a reassertion of the right of the community as against the power and prerogatives of the governing body. A community engagement process can and normally will allow for a dialogue amongst the different interests within the community so that people have a chance to absorb new

information, respond to different views and at least, in an ideal world, arrive at an outcome which everyone can accept. The focus of community engagement is best seen as enabling the community to make decisions regarding its future, including how any related actions or activities should be undertaken and people held accountable. EPA, (2012) outlined community engagement that can support the planning process to include:

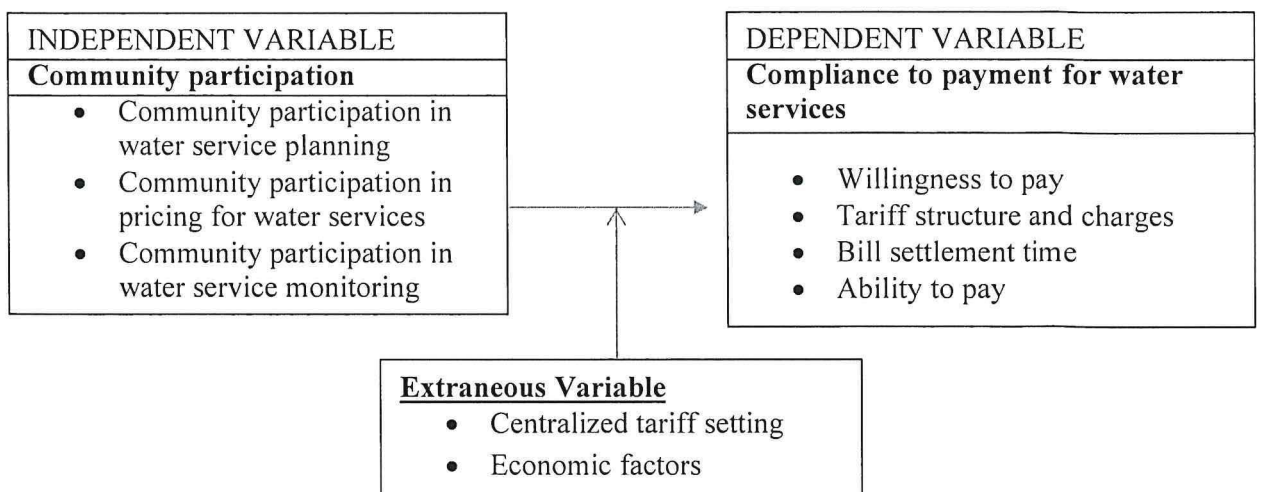
- Providing necessary input early in the process;
- Providing understanding of community goals and values (e.g., for green space or economic redevelopment) to guide the utilities' strategic direction and the identification and weighting alternatives assessment criteria;
- Generating specific ideas about strategies to meet goals, which may be also considered as part of the alternatives analysis where specific projects are selected; and
- Building a base of community understanding and support for selecting service levels, establishing reliability standards, and meeting revenue needs through rate changes or other mechanisms.

Community engagement is important for establishing and maintaining community understanding of the value of utility services and the resources needed to deliver them. In the specific planning context, community input about sustainability goals and values can inform utility service levels, reliability standards, revenue strategy, and other considerations (EPA, 2012). If customers understand system finances they may be more likely to support rate proposals (Gene, Monty, and Ric, 2007). According to Environmental Protection Agency (EPA) (2012, p.15), “active community engagement seeks to identify sustainability priorities, describe how water infrastructure decisions affect a community’s ability to achieve priorities, and provide an opportunity to discuss how the utility and community can align sustainability efforts. These discussions should address what communities are willing and able to afford if new infrastructure is needed or if other costs necessitate increases of rates or fees. Such discussions help set realistic expectations about levels of service and community costs, and inform the process for evaluating alternatives”.

This research focused only on the theory of community engagement with full involvement of the community as a theory of community participation. This is because the business community association complained to the Resident District Commissioner on failure of NWSC to involve them in setting the price.

### 2.3 Conceptual framework

The conceptual framework developed in this study follows (Miles & Huberman, 1994; Robson, 2011) concerns as quoted by SAGE (2012) about a conceptual framework as a visual or written product, one that “explains, either graphically or in narrative form, the main things to be studied—the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs the research—and the presumed relationships among them”. Community participation in water services may be referred to as the engagement of water users in the management of water resources, but although there could be other forms of community involvement in water management, in this study we limited community involvement in the planning, pricing and monitoring of water services in the provision of safe and clean palatable drinking water.



And in order to conceptualize the context specificity of the influence of community participation on compliance to payment for water services, a framework was proposed in which the impact on

compliance to water payment was described in relation to, willingness to pay, tariff structure and charges, bill settlement time, and ability of the users to pay for water. The research focused on water-related community participation and payments for water services, adopting a case-study methodology designed to capture more completely the micro-level factors that influence the direction and strength of the relationship of the two variables including the “localization” of the tariff policies in order to improve customer satisfaction and willingness to pay.

SERG (2007) contends that consultation fatigue arises as people are approached more and more often to participate, but perceive little return on the time and energy they give up to do so but this study is based on the belief that the community would be interested in taking part in water services management when called upon, and their expectations would be managed every time they get involved in water management

It is assumed that any attempt to assess the influence of community participation on compliance to payments for water takes into account other extraneous variables like centralized tariff setting, and the economic factors like inflation and the country’s Gross Domestic Product figures which will all influence the extent to which pricing of water will be determined. These parameters were however not examined.

#### **2.4 Conceptual review**

Here the researcher reviewed the variables in relation to the specific objectives. The researcher first reviewed community participation in water services planning on compliance to payment for water services, then reviews community participation in water services pricing on compliance to payment for water services and lastly reviewed community participation in water services monitoring on compliance to payment for water services.

#### **2.4.1 Community participation in water services planning on compliance to payment for water services**

Decisions that are based on mutual understanding and an agreed way forward are more likely to last than those based on a ‘win-lose’ trade-off (SERG, 2007). Individuals come into contact with the planning system rarely, unless they are already connected to it in some way, for example by being a member of a local group that comments on application proposals. This means that the level of knowledge about the planning system and the development process as a whole is limited. Local users of water resources often have no access to information concerning water planning and no right to participate in decision-making processes affecting those waters (Razzaque, 2009) yet regular communication provides an opportunity to connect, raise awareness, and educate customers about ongoing issues relating to water delivery, availability, quality, and regulation. Payments do not follow the market format as intermediaries frequently are setting the price, with users unaware even of the fact that they pay (Arild, 2009). The communication between the water supply company and its customers seems to be just one way – customers knocking at the door of the company reporting their problems, little communication flows from the company to the clients in order to communicate important messages for report on the problems that concern customers (Institute for Contemporary Studies (ICS), 2012). And yet, by encouraging wider participation in the process, the benefits are direct and measurable (Norwich City Council (NCC), 2010). In most cases, utilities in smaller communities will find it beneficial to pursue active engagement with the community, with community planning institutions, or with stakeholders. Aligning utility planning with existing community plans if community plans already exist, may not involve active utility participation in community planning itself, but rather a strategic decision to incorporate community goals into the utility’s own planning efforts. For example, the City of Portland, Oregon Water Bureau aligned with Portland’s Climate Action Plan by setting specific objectives in its Strategic Plan to reduce carbon emissions (EPA, 2012). Even smaller communities will occasionally need to garner community

support for critical decisions. Community-wide planning has multiple benefits in this context (EPA, 2012).

Allowing multiple stakeholders to define the problem may help ensure a fairer outcome that takes account of different values and needs (SERG, 2007) making people's participation essential for sustainable development. Sustainable services are not achieved without involvement of other stakeholders and particularly water users in the development of the policies and laws for sector development (Jacobson et.al, 2010). Practitioners and scholars widely cite the essential role that participatory planning plays in engendering a sense of ownership for the water system among community members (Robb, 2002), which in turn ensures users' commitment to long term operation and maintenance (Whittington et al., 2009). Involving the community in planning the revenue avenue could improve on customers' sense of ownership, and consequently lead to willingness to pay, although despite broad acceptance of the idea that "sense of ownership" among users is critical to infrastructure sustainability in developing countries, little is known about what sense of ownership is, or its drivers. Effective participation is likely to lead to greater acceptance of the decisions taken (Mostert, 2003, p180 quoted by Gooch &Stalnacke, 2013). The key for many developers is that meaningful participation can result in speedier decisions and a more sustainable development. The participation process enables the development to evolve to become a scheme with local support and if people have been actively involved in the process, they are more likely to care about the end result and look after it when it is built (NCC, 2010).

The value a water user attaches to water can be estimated in terms of individual willingness to pay (WTP). However, this estimate may be misleading in situations where consumers are not willing to pay for the expectations and perception that it is the government's responsibility to provide them with safe water at a free cost. The attitude that water is a free gift of God still persists in Uganda, and not all consumers pay their water bill in a timely manner. The willingness to pay for a competing product is estimated as the price at which the respondent would switch away from the status quo

product. With this set of assumptions, willingness to pay cannot be estimated for customers who would actually not buy the status quo product in the first place or have a different (unknown) status quo product (Breidert, Hahsler, & Reutterer, 2006).

Consumers will use water so long as the benefits from the use of an additional cubic meter exceed the costs so incurred (Vilcara & Karina, 2009). However, like any other good, water has optimal consumption and can lead to deadweight losses if there is a price increase leading to a reduction in consumption. There are different mechanisms by which tariffs can be collected. The most common systems according to Harvey, 2007 as cited by Vilcara & Karina, (2009) are:

- Reactive financing; when a system fails or breaks down the community or better-off households club together to pay for repair.
- Monthly tariffs; whereby each household (or adult) in the community is expected to contribute a given amount each month.
- Pay-as-you-fetch; require a caretaker to be present at the facility at all times (except when it is locked) to collect water tariffs from the community. Users pay a fixed amount per container which is filled by the caretaker.

A water tariff is the unit price charged per unit volume of water. Water tariff determine the level of revenue that service providers receive from the users. But implementation of water tariff does run into problems of unclear responsibilities, poor collection rates, and institutional capacities, (Zhong & Mol, 2010). As water is a scarce resource, pricing is increasingly seen as an adequate instrument of public policy (Vilcara & Karina, 2009). Pricing water to recover its full cost, including the costs of building, operating, and maintaining a water system, is essential to long-term sustainability (Ripp, 2010). Setting water tariffs is an important function for a water utility, as water pricing may be used to achieve several objectives. The primary goal in designing rates is to ensure that the utility recovers the appropriate amount of revenue from each customer class. The practical challenges

associated with setting water prices remain significant and prices that approach cost are often the exception rather than the rule (Pawsey & Crase, 2013). Rates for general water service include a fixed charge based on the size of the meter and a volumetric charge based on the amount of water used (Ripp, 2010). There are endless combinations of fixed and variable charges that are capable of generating the revenues needed. As a result, rate designs often reflect other policy preferences, such as promoting water conservation, simplifying billing practices, or maintaining equity among customer classes. Water is treated as a free resource and no charge is imposed for withdrawing it from a water source. Users pay for the transport of water from its source to its place of use and perhaps for treatment of the water and disposal of the return flows (Vilcara & Karina, 2009). Knowing how to set the proper rate for water service is a daunting challenge for small water systems. The rates must be high enough to recover the full cost of providing water. But if rates are too high customers will be irate, especially if they believe the rates are not set up in a fair manner (Gene, Monty, & Ric, 2007).

In a resource-constrained world, a water utility must encourage conservation, and the financial impacts of such a shift can be challenging for consumers to understand, especially when conservation is so often followed by a rate increase. As a result, customers often perceive conservation rates as punitive, that they are being charged higher prices for “doing the right thing”. Effective and just governance presumes accountability, access to information and a new compact between development agencies and stakeholder entities (Daugherty, 2015). While greater acceptance can partly be attributed to better informed and more creative decision-making, a perception that the decision is the result of a legitimate process will increase the likelihood of adherence by those affected. Gooch and Stalnacke (2013) claimed that better communication between the different actors in the water management is central to this ambition to solve problems.

#### **2.4.2 Community involvement in water services pricing on compliance to payment for water services**

Participatory pricing is a process of democratic policy-making in which the government invites citizen inputs during the process of setting the tariff and allows their influence in cost allocations (Zhang&Yang, 2009). Participatory pricing has drawn significant attention from public administration practitioners and scholars in recent years. Wang (2001) found that 46.2% of the respondents reported that their cities involved citizens or citizen activists in the pricing function. However, evidence is inconclusive as to why some local governments include citizen participation in the budget process while others do not (Yang & Callahan, 2007).

But while everyone, from the poorest to the wealthiest, is affected by the tariff, few people fully understand its significance, and even fewer have the opportunity and skills to influence and improve it. This is especially the case for poor people; whose voice is most often lost in the budget process, and yet are most seriously affected by weak public institutions and infrastructure (WaterAid, 2010). Yang and Callahan (2007) further commented that meaningful, authentic participation is rarely found, as many public officials are reluctant to include citizens in decision making, or if they do, they typically involve citizens after the issues have been framed and decisions have been made. Building customer and community appreciation of infrastructure investment value is likely to require proactive, ongoing stakeholder education and involvement. For example, changes to utility rates and fees typically require the approval of a governing body (e.g., utility board, municipal or county council) and can be difficult in the absence of reasonable customer support (EPA, 2012). Alkadry (2003), cited by Zhang and Yang, (2009), contended that professional administrators become indifferent to citizen needs because of their bureaucratic personality. That is, their responsiveness to citizens is constrained by their inability to take action or their unwillingness to take action given that they are constantly watched by their supervisors and governed by strict rules and job descriptions. City managers' personality and behaviors are shaped by their professional experience in a way that

their tendency toward citizen participation in the budget process is constrained by their inability and their unwillingness to involve citizens. Many exemplary managers, facing significant challenges, have creatively and successfully involved citizens in solving community problems. Therefore, it stands to reason that favorable attitudes toward citizen participation may positively affect administrative decisions to include citizens in administrative processes (Yang & Callahan, 2007). However, this argument has not been empirically tested.

The dimension of water as an economic good leads to an economic pricing of water that may affect the interests of the poor population. Tariffs are applied as an economic instrument to help achieving the social and economic equilibrium (Vilcara& Karina, 2009). Some important characteristics of the water tariffs include; the consistency with the needs and objectives of the community (Boland, 1997 cited by Vilcara& Karina, (2009). While consumers like high quality water at an affordable and stable price, suppliers like to cover all costs and have a stable revenue base. The “best” tariff design for a particular community and situation is one which strikes the most desirable balance among the objectives that are important to that community (Boland, 2011).

One key objective could be using the tariff to allocate social benefits through equitable distribution of revenues collected from different income groups in line with their affordability-to-pay (Kayaga & Motoma, 2009). From the perspective of CSOs engaging in budget advocacy, it is important to consider two main groups of stakeholders: those who already have a considerable influence in how the budget is planned and implemented, and those who lack a voice, but are most affected by the budget. But budget advocacy is not just about identifying and reaching the individuals and institutions which already have say in the budget. In particular, poor and marginalized people who traditionally lack a say in the budget are perhaps the most important ‘stakeholders’ (WaterAid, 2010).

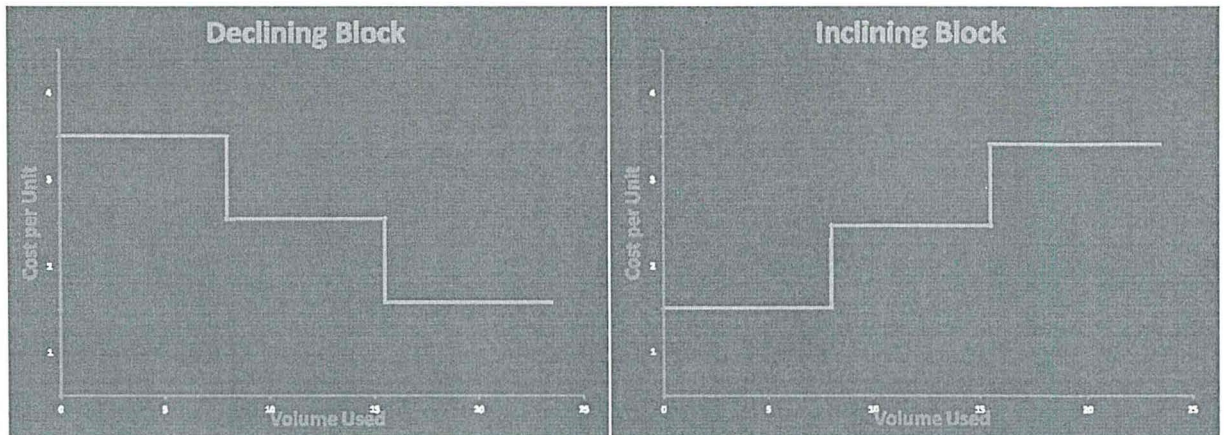
Water tariff structure encompasses the categorization of clients, the charge per each category, and the ability of the customers to meet these charges (Vilcara & Karina, 2009). Often there is lack of empirical data about how the applications of different tariff structures affect water use for different customer classes (SSWM, 2010). Typically, water utilities choose among three types of pricing schemes (Uniform, decreasing and increasing block rates), or some combination of these, to influence water use. A key policy question in designing urban water policy and institutional reforms is: what should be the appropriate structure of water charges to ensure long-term sustainability of water service?

**Fixed Charge Tariff (also known as Single Tariff or Flat rate tariff);** consumers pay a certain amount independent of the volume used. Sometimes there are different tariffs based on different types of users (industry, agriculture, etc.), property values or pipes diameters. In some places of India, a flat rate is charged in respect to the number of bedrooms one has.

**Constant Volumetric Tariff (also known as uniform volumetric tariff);** all users pay the same per unit of water used, independently of use (e.g. industry, commerce or household etc.).

**Increasing Block Tariff (IBT);** users pay different amounts for different consumption levels. The rate per unit of water increases as the volume of consumption increases. The model came up with an increasing block tariff that provided higher rates for the second and third blocks of consumption, in order to encourage water conservation (Kayaga & Motoma, 2009). IBT attempts to ensure that all customers can afford enough water to meet their basic needs by providing an initial quantity (“block”) of water at a low price, with volumes in excess of that block sold at a higher price. An outstanding feature of IBTs is the cross-subsidies. According to the World Bank (2006, p 85), cross-subsidies occur when one customer pays more than the cost of service so that another customer can pay less. Cross-subsidies can be an effective way of achieving social goals, while ensuring that water and sanitation utilities as a whole are self-financing (Vilcara & Karina, 2009).

## Inclining and declining tariff structure



Source: Ripp, 2010

**Two Part Increasing Block Tariff;** a fixed minimum periodical charge for all consumers, in addition to either a flat or variable tariff based on usage is charged. This tariff combines a fixed service charge plus two or more blocks of prices that increase as consumption increases. Billing, for instance, which is independent of consumption can be covered by the fixed charge. Sometimes Two Part Increasing Block Tariff are also called *lifeline tariffs* or *social block tariffs* because they aim to address the needs of the poor by providing a basic level of consumption either for free or at very low cost, with a form of block tariff for consumption above the lifeline level. The two-part tariffs are composed of: a variable charge reflecting the marginal costs of providing an additional cubic meter of water for the utility and a fixed charge intended to cover the non-attributable portion of the costs that is independent of the quantity consumed as well as ensuring that the utility can break even Le Blanc (2008).

**Decreasing Block Tariff;** consumers are charged a higher cost per unit of water at lower consumption levels. As the consumption level increases, the price per unit decreases. Whittington(2006 p21) explained that with a decreasing block tariff (DBT), consumers face a high

volumetric charge up to the specified quantity in the first block, pay less per unit for additional water, up to the limit for second block, then less still for the third, and so on.

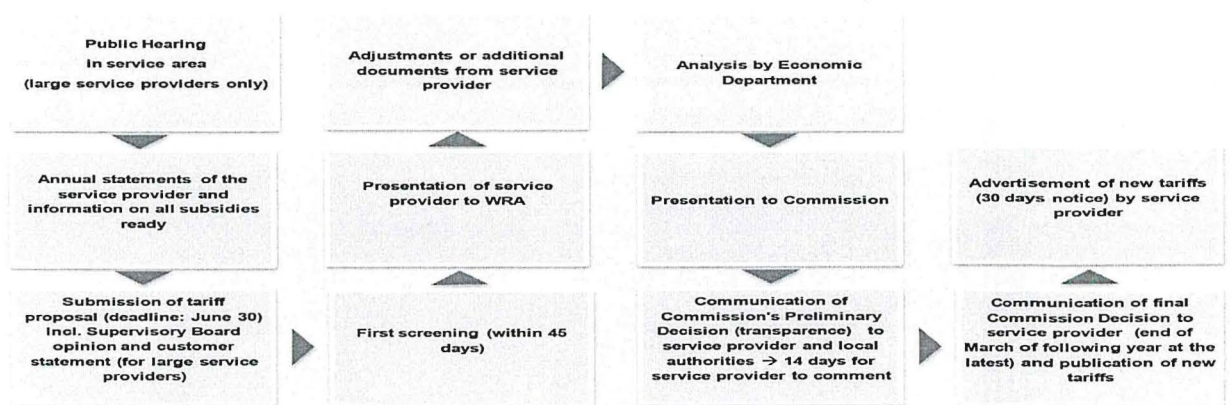
**Pay per use and subscriptions;** for public toilets or communal sanitation blocks (i.e. toilet, shower and laundry facilities), users can be charged per visit (pay-and-use) or through household subscriptions for unrestricted use, or an agreed number of visits over an agreed period of time, per adult user or for the whole family. Where wastewater services (e.g. sewerage, wastewater treatment and/or removal of sludge) are provided their costs are normally recovered through a surcharge on the tariff for drinking water. This is partly because the volume of wastewater is highly correlated with the use of clean water, and partly because of consumer resistance to paying for wastewater services separately.

SSWM, (2010) quoted Whittington(2002) that water tariff policies vary widely around the world, and there is no consensus on which tariff policy best balances the objectives of the utility, consumers and society. Although no single tariff design can meet all the different objectives of a tariff, the tariff must maximize efficient allocation of the resource (Vilcara& Karina, 2009); Water users should perceive the tariff as fair; rates must be equitable across customer classes; they must bring sufficient revenue to the suppliers; provide net revenue stability to the suppliers; the public must understand the rate-setting process; promote resource conservation; tariff-setting process should avoid rate shocks; be easily implemented; water must be affordable; rates must be forward looking; the rate structure must attempt to reduce administrative costs; include environmental costs; not in conflict with other government policies; water prices must also reflect supply characteristics like water quality, supply reliability, frequency of supply(Kayaga &Motoma, 2009).

In Albania the Water Regulatory Authority which is a public independent national institution, regulates the water supply, sewerage and treatment sector and sets tariffs (Albania Water Sector

Report, 2013). The Sector Water Regulatory Authority decides on the tariff setting methodology for calculating the wholesale and retail tariffs of the water, wastewater and treatment and no tariff, or part of it, is subject to change more than once per annum. Although the tariff setting process takes into account the public through the public hearing, it does not provide for greater involvement of the community members.

### Tariff Setting in Albania



Customers are usually not involved in the design and setting of tariff structures and they cannot reject inappropriate tariff structures because these are typically set by the regulatory agency (SSWM, 2010). In the study by Yang and Callan (2007), 71 percent of respondents placing “citizens don’t have time” as the number one obstacle among the top five obstacles, while approximately 61 percent of the respondents placed “citizens promote their own agenda” among the top five. It would thus be considered of importance to involve the community in revenue budgeting because water pricing touches on equity and on the willingness of the consumer to pay, but more on its affordability.

### **2.4.3 Community participation in water services monitoring on compliance to payment for water services**

Monitoring and Evaluation (M&E) have long been important to assess actual change against stated objectives to judge whether development assistance has been successful or not (Watershed Management Directorate (WMD), 2010). Different organization increasingly realized that there is need for monitoring with a wide range of stakeholders, thus making monitoring and evaluation more participatory. Participatory water monitoring has an important role to play in reducing or avoiding water-related conflict in large-scale (CAO, 2008).

Participatory Monitoring and Evaluation involves the assessment of change through processes that involve many people or groups, each of whom is affecting or affected by the impacts being assessed (Watershed Management Directorate (WMD), 2010). Through the collection of data that is credible to multiple parties, participatory monitoring can become an essential instrument for generating trust (Compliance Advisor/Ombudsman (CAO), 2008) which might yield into higher willingness to pay. From local to global levels, civil society stakeholders and private sector must be heard and responded to in meaningful dialogues with government agencies (SERG, 2007). By enhancing citizens' information and creating mechanisms for participatory monitoring and citizen-state dialogue and negotiation, social accountability mechanisms can contribute to better policy, program design, more development resources, more equitable and efficient public spending and greater and more sustainable development outcomes (McNeil, 2010). By giving stakeholders input, directly addressing their concerns, and fostering participation, participatory monitoring helps generate a sense of ownership and responsibility, thereby increasing social capital and diffusing possible sources of conflict (CAO, 2008).

A transparent process in which conflicting claims and views are considered can increase public trust in the final outcome (McNeil, 2010). This not only enhances the effective implementation of the outcome but also has broader implications for building an active civil society. The collapse of a process is often attributed to top-down implementation, e.g. not allowing enough time to build a consensus (SERG, 2007).

Evidence, much of it from the developing world, suggests that locally based, locally owned decisions are often the most effective in the long term (SERG, 2007) although the success of participatory processes is influenced by the role of the facilitator or project manager. Many projects attribute their successes to the skills of the person in this role, rather than to the particular methods used. For water monitoring to be truly participatory and to achieve its purpose, the program must have an effective and appropriate means of engaging citizens. Exactly how public participation is incorporated into a monitoring program depends on the objectives and interests of the company and community, the resources available, and the collective vision of what participation means (CAO, 2008).

They help communicate problems on the ground and broadcast local plans and news to communities. But monitoring programs need to be done right. In many instances, companies have spent large amounts of money on monitoring programs that may have a high degree of technical credibility, yet generate little trust in the community. One reason for this is that most monitoring programs are top-down, with the public receiving information that has been collected, analyzed, and reported by experts chosen by the project sponsor or company, and presented in a way that the public may not understand (CAO, 2008). In many instances, the information may not even address the real concerns of the community; rather, it may be strictly oriented toward a company's interests in compliance with regulations and legal commitments. Sometimes, communities become aware of monitoring results so late in the project cycle that they may have lost trust in the company before they receive the results.

A review of a large amount of case studies showed that Payments for Environmental Services in practice depends rather fundamentally on state and/or community engagement (Arild, 2009). As Staffan et al. (2014) quoted Dalton (2008); most findings confirm that, like voting, non-institutionalized political activity remains tied to social-economic status. The benefits of public participation are often taken for granted, and partly for this reason the underlying rationale for greater public participation is sometimes poorly articulated, making it more difficult to determine how to pursue it effectively (O'Faircheallaigh, 2010) and yet it is worth noting that public managers may respond to the barriers proactively rather than passively. In that case, the structures present in water tariff policy formulation process greatly favor the elites, politicians and the rich who in exchange greatly contribute to the economic development. Robb (2002) in her study "Can the Poor Influence Policy" showed how participatory methods and approaches can enable poor people to analyze their situations and express their priorities and how these can fundamentally differ from those assumed by policy makers. Small rate increases implemented over a number of years may be more acceptable to customers than infrequent, large rate increases (EPA, 2012).

Recent European regulations for rural development emphasize the requirement to involve stakeholder groups and other appropriate bodies in the policy-making process (Prager & Freese, 2009). The last 20 years have seen a shift from the view that publics need to be educated so that they trust science and its governance to the recognition that publics possess important local knowledge and the capacity to understand technical information sufficiently to participate in policy decisions. Only preliminary efforts have been made to examine how participatory and deliberative designs may be constrained in their effectiveness by the impacts of governance context (Hoppe, 2011).

## **2.5 Summary of the literature review**

While contemporary challenges relating to the management of water resources necessitate collaboration amongst a range of groups in society, difficulties remain in securing such collaborations (Gooch & Stalnacke, 2013). Community participation is widely advocated, but there is little structured, empirical research into its effect on policy development (Bijlsma, Bots, Wolters, & Hoekstra, 2011). Scholars have noted the growing advocacy and need for public participation in water service provision (Mugumya, 2013; SSWM, 2010; Razzaque, 2009; SERG, 2007). The public is generally not aware about the cost of providing safe water services (Gooch & Stalnacke, 2013), yet the tariff affect the goals of different stakeholders in conflicting ways; consumers need affordable and equal water services whereas utilities require stable revenues for cost recovery and economic efficiency (SSWM, 2010).

Meaningful community participation results in a development process that can tap into local knowledge and additional resources, help to strengthen the community in which it is located, can shape designs to address issues and result in more appropriate solutions that are responsive to the environment and which satisfy local demand (NCC, 2010). Government might be constrained by a lack of resources, but citizen involvement can be used to build partnerships in order to address resource problems. Therefore, the impact of those barriers on the level of citizen involvement might not necessarily be negative (Yang & Callahan, 2007).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

Chapter three of this study provides the reader with the research methods and the methodology that were used to conduct the survey. It entails the research design, sampling technique and method, data collection and data analysis methods that were used in the study.

#### **3.2 Research design**

A case study design was used in this study to emphasize detailed contextual analysis of the limited number of conditions that influence compliance to payment for water service and its relationship with community participation. Soy (2006) pronounces researcher Robert K. Yin's (1984) definition of a case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used. The research was a single in depth analysis into community participation on compliance to payment for water services. Both quantitative and qualitative data were collected and used. Quantitative data was particularly used to discover how communities participate in planning, pricing and monitoring of water services, while qualitative data was used to find out why community participation affects the compliance to payment for water services.

#### **3.3 Study population**

The 2014 national population census indicated a population of 44,604 persons in Kitgum Town Council with 2,041 persons living in the town parish area. This made the study population of the survey.

### 3.4 Sample size

From the population of 2,041 persons in the Town Parish Area, only members of the Business Community Association were subjected to the survey. Other respondents were purposively selected because they were knowledgeable on community participation and the respective positions they held. The Business Community Association was selected most especially due to the fact that they had expressed their interest for involvement in water service provision. A sample size of 65 respondents was used, selected based on Krejcie and Morgan (1970) formula, given by;

$$s = \frac{X^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

Where,

*s* = required sample size

$X^2$  = the table value of chi-square for 1 degree of freedom at the confidence level (3.841)

N = Size of population

P= the population proportion (assumed to be .50 since this would provide the maximum sample size).

d= the degree of accuracy expressed as a proportion (.05)

**Table 3 Sample size per category**

| Category   | Study Popn | Sample | Data collection tool      |
|--|------------|--------|---------------------------|
| Members of Business Community Association in possession of a water connection. | 63         | 56     | Questionnaires            |
| Top management of NWSC Kitgum Area (Area Manager and Commercial Manager)       | 2          | 2      | Semi-structured interview |
| Political leadership (Local Chairperson III)                                   | 1          | 1      | Semi-structured interview |
| Executive Council members LCIII  | 5          | 5      | Focused Group Discussions |
| Resident District Commissioner   | 1          | 1      | Semi-structured interview |
| Total  | 72         | 65     |                           |

Using Krejcie and Morgan's (1970) table for determining sample size, the sample unit for the study was as tabulated in the table 3 above.

### **3.5 Sampling technique**

Purposive sampling was used in selecting key informants for individuals holding specific offices, and those that were knowledgeable about community participation and water services. These individuals were selected because of the knowledge on water service provision and the representative positions they held. Strata were formed to give an equal chance to the different categories to take part in the study.

The selection of the respondents from each stratum was by systematic sampling as prescribed by Deming (2010). According to Deming, sampling of human population with a random start was expected to yield small gains over random sampling possibly from 2 to 10 percent smaller variance than the results of a sample of the same size selected entirely at random from whole universe. These individuals were grouped into strata categorized according to levels of involvement in water service provision. The grouping of respondents in strata directed the use of stratified sampling.

### **3.6 Research Instruments**

Interviewing and questionnaire were the instruments used in the study using different tools to different strata because of the difference in the level of involvement between the strata.

#### *3.6.1 Questionnaire*

As recommended by Kothari (2007) on the use of a questionnaire, list of questions, were printed and administered to all the business community members in the survey. Most of the questionnaires were filled by the research assistant on the response of the respondents although some few questionnaires were left with the respondents for a day or two to give them chance to fill it at their own leisure.

### *3.6.2 Semi-structured face-to-face-interviews*

Semi-structured face-to-face-interviews were scheduled for NWSC's top management and the political representatives. The researcher was present during the interviews and the Focused Group Discussion, asking questions and helping the respondents in defining their responses.

## **3.7 Data collection method and procedures**

Table 3 indicates the data collection tools that were used in each category.

### *3.7.1 Interviews guide,*

Interview guide were used to collect primary data as recommended by Kothari (2007). Semi-structured interviews were conducted to the top management of NWSC, and the secretary for Works in Kitgum Town as a representative of the Chairperson LCIII to have an in-depth insight into their views and options.

### *3.7.2 Questionnaires*

Structured questionnaires were administered to the members of the business community because of the high volume of respondents as recommended by Kothari (2007) and Krejcie and Morgan (1970) formula was used to determine the number of respondents. The questionnaires and interview guides were structured in such a way that they capture both qualitative and quantitative data sets, administered to 56 respondents.

### *3.7.3 Focus group discussions*

A focused group discussion was held with 4 councilors at LCIII Kitgum Town Council. A Focused Group Discussion was used to stimulate group thinking among members as emphasized by Krueger (2002).

#### *3.7.4 Documentary review*

Documentary review was used to collect secondary data. Secondary data was necessary to inform the researcher on the previous researcher's views about community participation and compliance to payment for water services so that the researcher could form a basis for comparison and data verification as emphasized by Kothari (2007). A collection of relevant reports, and documentaries from the Ministry of Water and Environment, the internet, NWSC and other water sector players were searched for. These documents were analyzed to examine the view of other researchers on community participation and compliance to payment for water services.

### **3.8 Validity of questionnaire and interview guide**

The researcher first ascertained whether data collection instruments had the necessary validity before they were used. This was done by establishing whether instruments measured what the study intended to measure (Arya et al., 2002). Content validity of the instruments was measured. Hussey and Hussey, 1997 affirm that respondents are more likely to honestly complete and return questionnaires they perceive as having relevant content. To measure content validity, the research supervisors evaluated whether the instruments had the content they intended to measure. As recommended by Amin (2005), items that were found to be ambiguous and those judged inappropriate were either eliminated or adjusted. In the content validity test, the validity of each item were evaluated on a scale for which 1 = relevant, 2 = quite relevant 3 = somehow relevant and 4 = not relevant. The validity of the instrument was tested using the Content Validity Index (CVI). The CVI was measured using the formula:  $\text{Content Validity Index (CVI)} = K/N$ , Where K was total number of items rated relevant and N, total number of items in the questionnaires. The findings are shown in the table 4 below.

**Table 4: Content validity index (CVI) of Instruments**

| Expert         | Content validity index |                 |
|----------------|------------------------|-----------------|
|                | Questionnaire          | Interview guide |
| Supervisor 1   | 0.81                   | 0.82            |
| Supervisor 2   | 0.83                   | 0.78            |
| <b>Average</b> | <b>0.82</b>            | <b>0.80</b>     |

*Source: Pilot data*

As indicated in Table 4, all CVIs for the two instruments were above 0.80, indicating that the items in the instruments actually measured the study variables. On average, the content validity index for the questionnaire was 0.82, while that of the interview guide was 0.81. These values were in agreement with Mugenda (2003), who recommended that for an instrument to be valid for research purposes, its content validity index has to be 0.8 and above. The researcher also ensured that all items in the instruments had face validity. The words that were used in instruments were simple, clear and related to the research problem.

### 3.9 Reliability of Instruments

When an instrument is reliable, it yields consistent responses because it is interpreted well. If the desired variable is not measured reliably, the information obtained would not be correct and therefore not be valid. Pilot data was collected from 20 respondents and used to measure and enhance the reliability of the questionnaire. Data was then collected and entered in the Statistical Package for Social Sciences (SPSS) version 20. A Cronbach alpha coefficient test of reliability was calculated using the formula below.

$$\alpha = \frac{K}{K - 1} \left( 1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

Where  $\sigma_X^2$  was the variance of the observed total item scores, and  $\sigma_{Y_i}^2$  was the variance of component  $i$  for the pilot sample. The reliability test findings are presented in the table below.

**Table 5: Reliability of the Instrument**

| <b>Variable</b>             | <b>Alpha coefficient</b> |
|-----------------------------|--------------------------|
| Participation in planning   | 0.723                    |
| Participation in pricing    | 0.895                    |
| Participation in monitoring | 0.712                    |
| Compliance to payment       | 0.761                    |
| <b>Average</b>              | <b>0.773</b>             |

*Source: Pilot data*

Findings in table 5 above revealed that the alpha coefficients of the sub variables making the independent variable community participation were; participation in planning = 0.724, participation in pricing = 0.895 and participation in monitoring = 0.712. The alpha coefficient for the dependent variable, compliance to payment was 0.761. All Cronbach alpha coefficients were above 0.70 which indicated that the questionnaire was reliable enough to be used as a research instrument (Sekarani, 2003).

### **3.10 Data analysis and presentation**

The study aimed to examine the influence of community participation on compliance to payment for water services. The researcher analyzed the demographic representation of the respondents: Gender, educational background and age of the respondents to appreciate the level of maturity and exposure to comprehend issues. Frequency analysis was first used to explore the extent to which the community participates in planning, pricing and monitoring of water services. Given the random sample of observation, the population regression line was estimated by;  $Y = b_0 + b_1X$ ; Where

Y=Dependent Variable

X=Explanatory Variable (independent Variable)

$b_1$ = Slope of gradient (regression Coefficient)

$b_0$ = intercept (value of Y when X is Zero) (constant)

From the linear Equation;

$$b_1 = \frac{\sum [(X_i - \bar{X})(Y_i - \bar{Y})]}{\sum [(X_i - \bar{X})^2]}$$

$$b_1 = r * \left(\frac{S_y}{S_x}\right)$$

$$b_0 = \bar{Y} - b_1 * \bar{X}$$

Where:

$b_0$  = is the constant in the regression equation

$b_1$  = is the regression coefficient

$r$  = the correlation between X and Y

$X_i$  = the X value of observation  $i$

$Y_i$  = the Y value of observation  $i$

$\bar{X}$  = is the mean of X

$\bar{Y}$  = is the mean of Y

$S_y$  = Standard deviation of Y

$S_x$  = Standard deviation of X

Linear regression was used to establish the influence of community participation in planning, pricing and monitoring of water services on compliance to payment for water services. Linear regression was used because it focusses on the conditional probability distribution of one variable given another variable. Data was modeled using linear predictor functions to estimate unknown model parameters. According to Kothari (2007), simple regression analysis is used to find the “best” fit that a straight line of this kind can give.

The actual analysis involved both qualitative and quantitative techniques. Small scale in-depth qualitative interviewing of key informants and logical analysis were used for qualitative data

analysis supported by descriptive statistics, mainly frequencies, means and cross-tabulations. The data collected from the questionnaires enabled the development of a database in Statistical Package for Social Science (SPSS) and MS Excel spreadsheets.

The findings are reported using carefully titled and well labeled tables and figure for quantitative data, while narrations were used to present qualitative information. Data pre-processing was done by activating Data View and Variable View spreadsheets in the Statistical Package for Social Science (SPSS) and data input in MS Excel spreadsheets. This was followed by the coding of information and data entry into files. Once finished, data outliers, mistakes and errors were checked, identified and cleaned. Finally, the assessment of the overall quality of the dataset concluded the exercise to enable quantitative data analysis.

### **3.11 Limitations to the study**

Since Uganda has not fully enhanced the techniques for record management and research, there is a wide gap of literature available in relation to Uganda's specifics. Most of the literature available for review was based on other countries whose cultures may greatly differ.

The second limitation was the limited skills available to the researcher which may have limited the use of other more appropriate methods of conducting this kind of research. The researcher tried to improve on the quality of work and research skill by taking on the research with close supervision from the supervisors and taking their guidance very seriously.

The other limiting factor was the unmatched expectations of the respondents, and the absence of the political representatives. Since the accuracy of the research results is greatly determined by the information given by the respondents, the researcher mitigated the absence of the RDC by using the minutes of the meeting between NWSC and the Business Community to quote the views that were shared by the RDC. The absence of the LCIII chairperson was mitigated by interviewing the Secretary for Works who is politically responsible for water service related issues in Kitgum Town Council.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Introduction

The study investigated the influence of community participation in the planning, pricing and monitoring of water services on compliance to payment for these services. The demographic characteristics of respondents are presented first then followed by the findings on the study objectives.

#### 4.2 Study response rate

The study recorded a response rate of 92% with 60 out of 65 targeted respondents responding to the survey. The high response rate with the business community was attributed to the use a research assistant to administer most of the questionnaires as opposed to leaving them behind for the respondents to fill them at their own leisure. Out of 56 members of the business community, 2 questionnaires were not collected back even after numerous visits to the respondents. And for the top management team at NWSC, the Area manager was new and he referred that the commercial officer would be adequate to respond and give NWSC's view in the matters of community participation and compliance to water payment.

| Category   | Population |
|--|------------|
| Members of Business Community Association in possession of a water connection. | 54         |
| Top management of NWSC Kitgum Area (Area Manager and Commercial Manager)       | 1          |
| Political leadership (Local Chairperson III)                                   | 1          |
| Executive Council members LCIII  | 4          |
| Resident District Commissioner   | 0          |
| Total  | 60         |

The LCIII Chairperson was not available but he was represented by the Secretary for Works in Kitgum Town Council. The Focused Discussion Group had targeted 5 member representatives from

the executive of Kitgum Town Council but not only 4 were present for the discussion. The councilor for Disability, Women councilor for the Town Parish and the Town Agent for Town Parish were the ones present in the discussion. Lastly, the Resident District Commissioner for Kitgum District was not available for the interview, neither was the deputy. To mitigate his absence the researcher used the minutes of the meeting that was chaired by the RDC between NWSC and the Business community to quote the RDC's concerns. In this meeting, the RDC agreed with the business community on the matter that the community is not involved in the planning for water services and he requested NWSC to inform and present to the business community the process undertaken by NWSC in setting the tariff. The absence of the local politicians was accounted to the political environment at the time which involved numerous political campaigns and rallies.

### 4.3 Demographic data of respondents

The researcher collected relevant demographic information of respondents. The findings are presented in the tables below.

#### 4.3.1 Gender Distribution of Respondents

Respondents were asked to indicate their gender. The findings are indicated below.

**Table 6 Gender of Respondents**

| <b>Gender</b> | <b>Frequency</b> | <b>Percent</b> |
|---------------|------------------|----------------|
| Male          | 36               | 66.7           |
| Female        | 18               | 33.3           |
| <b>Total</b>  | <b>54</b>        | <b>100.0</b>   |

*Source: primary data*

According to the findings in table 6, majority of the respondents (67.7 %) were male while the rest (33.3 %) were female. Though the male were slightly more than the female both, gender were well represented. Therefore, responses were a true representation of both genders.

#### 4.3.2 Age Category of respondents

The researcher established the age category of respondents. The findings are shown below.

**Table 7 Age Category of Respondents**

| Category     | Frequency | Percent      |
|--------------|-----------|--------------|
| 15-25        | 8         | 14.8         |
| 26-45        | 24        | 44.4         |
| 46-69        | 17        | 31.4         |
| =>70         | 5         | 9.2          |
| <b>Total</b> | <b>54</b> | <b>100.0</b> |

*Source: primary data*

The findings in table 7 reveal that majority of respondents (44.4 %) were aged 26-45 years followed by 31.4 % who were age 49-69 years, then followed by 14.8% who were aged 15-25 years and finally by another 9.2 % who aged 70 years and above. This finding indicates that the majority of respondents were mature enough to own property and hence understand issues to community participation in water services management. Therefore they were expected to provide valid responses.

#### 4.3.3: Education of respondents

Respondents also indicated their level of education in the table below.

**Table 8 Education of respondents**

| Education  | Frequency | Percent |
|------------|-----------|---------|
| =< A-level | 9         | 16.6    |

|              |           |              |
|--------------|-----------|--------------|
| Certificate  | 10        | 18.5         |
| Diploma      | 15        | 27.7         |
| Degree       | 12        | 22.3         |
| Masters      | 6         | 11.2         |
| PhD          | 2         | 3.7          |
| <b>Total</b> | <b>54</b> | <b>100.0</b> |

*Source: primary data*

As indicated in the table 8 above the majority of respondents (27.7%) had diploma education, followed by 22.3% who had degrees, then followed by 18.5% who had certificate level education, and by 16.6% who had A- level and below and 3.7% who had PhD. Generally, the level of education of most respondents was high enough to enable them understand the value of and whether they participate in waters services management in their area and therefore were able to provide reliable responses.

#### **4.4: The effect of Community Participation in Waters Services Planning on Compliance to Water Services Payment**

The first objective of the study was to determine the effect of community participation in planning on compliance to payment of water services. Frequency analysis was first used to explore the extent to which the community participates in the planning for water services. Participation in planning was explored using items such as participation in general planning, setting tariffs, budgeting for services and information dissemination on costs for water services. The findings are shown in the table 9 below.

**Table 9 Frequencies, Percentages, Means and Ratings on community participation in waters services planning**

| Participation in planning  |          | <i>SA</i> | <i>A</i> | <i>N</i> | <i>D</i> | <i>SD</i> | Mean | SD  | Overall rating |
|--|----------|-----------|----------|----------|----------|-----------|------|-----|----------------|
| I participate in the general water services planning                           | <b>f</b> | 0         | 1        | 19       | 29       | 5         | 1.4  | 1.9 | disagree       |
|  | <b>%</b> | 0         | 1.9      | 35.2     | 53.7     | 9.3       |      |     |                |
| I participate in planning for water services tariffs                           | <b>f</b> | 4         | 3        | 9        | 9        | 29        | 1.6  | 1.8 | disagree       |
|  | <b>%</b> | 7.4       | 5.6      | 16.7     | 16.7     | 53.7      |      |     |                |
| My leaders represent me when NWSC is pricing for water services                | <b>f</b> | 21        | 19       | 1        | 9        | 4         | 3.2  | 2.9 | agree          |
|  | <b>%</b> | 39.9      | 35.2     | 1.9      | 16.7     | 7.4       |      |     |                |
| I am well informed on how the current costs of waters services were arrived at | <b>f</b> | 1         | 2        | 2        | 34       | 15        | 1.7  | 1.5 | disagree       |
|  | <b>%</b> | 1.9       | 3.7      | 3.7      | 63.0     | 27.8      |      |     |                |

The findings in the table 9 above show that with regard to community participating in the general water services planning, the majority of the respondents disagreed( 53.7%) and 35.2 % were not sure and 9.3% strongly disagreed . As far as community participation in planning for water services tariffs is concerned, 53.7% strongly disagreed that they participated, followed by 16.7% who disagreed and by another 16.7% who were not sure. In relation to leaders representing them when NWSC is pricing for water services, 39.9 % strongly agreed and 35.2 % agreed. With regard to being well informed on how the current costs of waters services were arrived at, the majority 63.0 % disagreed and 27.8% strongly disagreed and 3.7% were not sure. The findings show that generally there is low community participation in planning for water services given the fact that respondents disagreed to participating in general planning, planning for water tariffs and knowing how tariffs were arrived at. Using logical analysis by the researcher, it is analyzed that this low participation in planning especially in the area of tariffs and budgeting was likely to reduce community’s understanding of the origin of the prices they pay for water. It was also likely to lead to mistrusts of the billing system.

The views of key informants were also explored on this issue in a Focused Discussion Group and individual in-depth interviews with the commercial officer. Key informants indicated that there is some community representation in the planning of water services, it was not engaging enough. The local water services committee was operational and had some representatives from the community, such as businessmen, and a few local leaders. However, key informants complained that participation is not very inclusive and many times does not achieve its intended purpose. The Commercial and Billing officer for NWSC-Kitgum said that “*representation is rather limited to LCs and Business representatives, who “are not able to fully present the needs of the community”*”. The Councilor for People with disabilities complained that there is a very big communication gap between the technocrats of NWSC and the community. He explained “*In waters services meetings, the technocrats withhold certain information and use technical language that is difficult to understand by the community representatives*”. As a result community participation is just perfunctory since they do not make significant contributions due to lack of pertinent information. Another council representative also complained that in most cases, the community is not aware of what is going on since “*obligations of the councilors are overlooked making it very difficult to holding the service providers accountable*”. These findings from the key informants show that community participation in planning is not engaging enough and it is used just as rubber stamp by NWSC for sanctioning their policies.

Liner regression was done to establish the influence of community participation in waters services planning on compliance to payment for services. Scores on community participation in planning were regressed on scores on compliance to payment for water services. The findings are shown in the table 8 below.

**Table 10: Showing Regression Results of Community participation in planning vs compliance to payment**

| <b>R</b> | <b>R square</b> | <b>Adjusted R square</b> | <b>B</b> | <b>Beta</b> | <b>Sig.</b> |
|----------|-----------------|--------------------------|----------|-------------|-------------|
| 0.54*    | .291            | .282                     | 1.020    | .54         | .03         |

*(Source: Primary Data)*

**Values significant at 0.05 level (2-tailed)**

**Predictor: participation in Planning, Dependent variable: Compliance to waters services payment**

From the regression model summary in Table 10, the correlation between participation in Planning and compliance to waters services payment is  $r = 0.54$ . This implies that, generally, community participation in planning for waters services is moderately and positively related to community compliance to payment for the services. The relationship was significant at  $p\text{-value} < 0.05$ . This means that the more opportunities for participation in waters services planning given to the community the higher their intention to pay for the services. The results of the regression model indicated an adjusted R-square of 28.2%. This implies that on average, community participation can cause a 28.2% increase in the compliance to payment by the community. This implies community participation in the general planning of waters services facilities community ownership and understanding of the costs for the services. This subsequently leads to higher compliance to payments by the community.

#### **4.5: The effect of Community Participation in Waters Services Pricing on Compliance to Water Services Payment**

The second objective of the study was to determine the effect of community participation in water services pricing on compliance to payment of water services. Frequency analysis was first used to explore the extent to which the community participates in pricing waters services. This issue was

explored using items such as involvement in costing, setting tariffs, and trust in tariff setting process.

The findings are presented in the table 11 below.

**Table 11 Frequencies, Percentages, Means and Ratings on community participation in waters services pricing**

| Participation in planning   |   | SA  | A    | N    | D    | SD   | Mean | SD  | Overall rating |
|---|---|-----|------|------|------|------|------|-----|----------------|
| I take part in costing water services                               | f | 0   | 12   | 4    | 16   | 22   | 1.5  | 1.2 | disagree       |
|   | % | 0   | 22.2 | 7.4  | 29.6 | 40.7 |      |     |                |
| I made an input in the current tariffs of water services            | f | 0   | 14   | 2    | 20   | 18   | 1.3  | 1.0 | disagree       |
|   | % | 0   | 25.9 | 3.7  | 37.0 | 33.3 |      |     |                |
| I trust the water company costing process                           | f | 0   | 1    | 19   | 29   | 5    | 1.1  | 1.6 | disagree       |
|   | % | 0   | 1.9  | 35.2 | 53.7 | 9.3  |      |     |                |
| The community always participates in setting water services tariffs | f | 4   | 3    | 9    | 9    | 29   | 1.2  | 1.9 | Disagree       |
|   | % | 7.4 | 5.6  | 16.7 | 16.7 | 53.7 |      |     |                |

The findings in the table above show that majority of respondents disagreed (40.7%) and 29.6% strongly disagreed that they take part in costing water services. As far as making an input in the current tariffs of water services in concerned, 37.0% disagreed and 33.3% strongly disagreed. With regard to trusting the water company costing process, the majority (53.7%) disagreed and 35.2% were not sure. In relation to community always participating in setting water services tariffs, the majority, 53.7% strongly disagreed, 16.7% disagreed and 16.7% were not sure. These findings point to very low community participation in pricing water services, which is likely to cause defaults in payments for the services.

The views of key informants were also explored on this issue in a Focused Discussion Group and individual in-depth interviews with the commercial officer. The findings from the key informants indicate no community involvement in the pricing of water services, confirming the above findings. In fact there was lot of complaints about the accuracy of pricing and billing by the community. The Chairperson, Water and Sanitation committee Kitgum Town Council said that “customers are only

sent water bills and they do not know how it is arrived at". She added that "majority of customers feel that NWSC is cheating them, meters are not accurately read". This has resulted into low compliance to payment of bills. Very few pay their bills promptly or in advance, though they have the ability to pay. The community feels that transparency in pricing and billing is nonexistent. This is the reason why some people only pay after being disconnected. Another councilor intimated that some people even "decide to stop getting water from NWSC". This happens due to "lack of clarity in their bill calculation". Because of minimal involvement, some community members feel that since water is acquired free by NWSC, it should also be supplied free or at a very minimal cost.

Liner regression was done to establish the influence of community participation in waters services pricing on their compliance to payment for the services. Scores on community participation in waters services pricing were regressed with scores on compliance to water services payment. The findings are shown in the table below.

**Table 12: Showing Regression Results of participation in pricing against Compliance to payment for water services**

| <b>R</b> | <b>R square</b> | <b>Adjusted R square</b> | <b>B</b> | <b>Beta</b> | <b>Sig.</b> |
|----------|-----------------|--------------------------|----------|-------------|-------------|
| 0.46*    | .17             | .16                      | 0.96     | .046        | .02         |

*(Source: Primary Data)*

**Values significant at 0.05 level (2-tailed).**

**Predictor: participation in pricing, Dependent variable: Compliance to payment**

The regression results in table 12 above show that the correlation between community participation in waters services pricing and compliance to water services payment is  $r = 0.46$ . The relationship was significant at  $p\text{-value} < 0.05$ . This implies that, community participation in pricing is positively related to compliance payment for the services. The results of the regression model indicated an adjusted R-square of 16%. This implies that on average, community participation will lead to about

16% increasing in compliance to payment. This is because community participation in pricing enables them to understanding the origin of the price they pay. They are more trusting of the billing and also appreciate the role of their payments in sustaining quality water services.

#### 4.6: The effect of Community Participation in Waters Services Monitoring on Compliance to Water Services Payment

The third objective of the study was to determine the effect of community participation in water services monitoring on compliance to payment of water services. Frequency analysis was first used to explore the extent to which the community participates in monitoring waters services. This issue was explored using items such as monitoring budget implementation, revenue collection and quality of water services. The findings are shown in the table 13 below.

**Table 13 Frequencies, Percentages, Means and Ratings on community participation in waters services monitoring**

| Participation in planning   |          | <i>SA</i> | <i>A</i> | <i>N</i> | <i>D</i> | <i>SD</i> | Mean | SD  | Overall rating |
|---|----------|-----------|----------|----------|----------|-----------|------|-----|----------------|
| I take part in monitoring budgets implementation of water services by NWSC  | <b>F</b> | 1         | 0        | 13       | 19       | 21        | 1.3  | 1.5 | disagree       |
|   | <b>%</b> | 1.9       | 0        | 24.1     | 35.2     | 38.9      |      |     |                |
| I take part in monitoring revenue collection of water services  | <b>F</b> | 1         | 12       | 5        | 21       | 15        | 1.6  | 1.8 | disagree       |
|   | <b>%</b> | 1.9       | 22.2     | 9.3      | 38.9     | 27.8      |      |     |                |
| I participate in monitoring other customers to ensure that they perform their obliged duties towards water services | <b>F</b> | 0         | 14       | 2        | 20       | 18        | 1.5  | 1.7 | disagree       |
|   | <b>%</b> | 0         | 25.9     | 3.7      | 37.0     | 33.3      |      |     |                |
| I am involved in monitoring the quality of water services   | <b>F</b> | 0         | 1        | 19       | 29       | 5         | 1.7  | 1.2 | disagree       |
|   | <b>%</b> | 0         | 1.9      | 35.2     | 53.7     | 9.3       |      |     |                |
| I am consulted to contribute to improvements in water service provision through participation in water monitoring   | <b>F</b> | 4         | 3        | 9        | 9        | 29        | 1.9  | 1.5 | disagree       |
|   | <b>%</b> | 7.4       | 5.6      | 16.7     | 16.7     | 53.7      |      |     |                |

The findings in the table 11 above show that majority of respondents disagreed (38.9%) and 35.2% strongly disagreed that they take part in monitoring revenue collection of water services. With regard to community participation in monitoring revenue collection of water services, 38.9% disagreed and 27.8% strongly disagreed. As far as participating in monitoring other customers to ensure that they perform their payments is concerned, 33.3% strongly disagreed and 37.0% disagreed. In relation to involvement in monitoring the quality of water services, 53.7% disagreed, followed by 35.2% who were not sure and 9.3% who strongly disagreed. As far as being consulted to contribute to improvements in water service provision is concerned, 53.7% strongly disagreed, 16.7% disagreed and 16.7% were not sure. This finding indicates very low participation of the community in monitoring waters services.

The views of key informants were also explored on this issue in a Focused Discussion Group and individual in-depth interviews with the commercial officer. Key informants indicated very little community involvement in waters services monitoring. A councilor revealed that there is no *“time table for monitoring of waters services planning implementation by the community”*. A councilor representing women added that *“without monitoring tools and guidelines it is impossible to do meaningful monitoring”*. Monitoring can only be effective if it is well planned and has tools and objectives. The available mechanism of monitoring is not good. The current monitoring is done by mouth. There is no checklist to guide monitoring and no preset parameters to monitor. There is need to provide for a checklist and tools to guide monitoring of service provision.

Liner regression was done to establish the influence of community participation in waters services monitoring on compliance to water services payment. Scores on community participation in waters services monitoring were regressed on scores on compliance to water services payment. The findings are shown in the table below.

**Table 14 Showing Regression Results of community participation in waters services monitoring vs compliance to water services payment**

| <b>R</b> | <b>R square</b> | <b>Adjusted square</b> | <b>R</b> | <b>B</b> | <b>Beta</b> | <b>Sig.</b> |
|----------|-----------------|------------------------|----------|----------|-------------|-------------|
| 0.43*    | .123            | .112                   |          | 1.020    | .43         | .04         |

*(Source: Primary Data)*

**Values significant at 0.05 level (2-tailed)**

**Predictor: Community participation in monitoring, Dependent variable: Compliance to payment**

From the regression model summary in table 14, the correlation between Community participation in monitoring and Compliance to payment was  $r = 0.43$ . This implies that community participation in monitoring is moderately and positively related to compliance to payment. The relationship was significant at  $p\text{-value} < 0.05$ . The results of the regression model indicated an adjusted R-square of 11.2%. This implies that on average, community participation in monitoring causes a corresponding 11.2 % increase in compliance to payment.

#### **4.7 Overall contribution of Community participation in wasters services management on their Compliance to payment for the services**

The researcher finally investigated the combined (overall effect) of community participation in water services management on compliance to payment for the services. Scores on participation in planning, pricing and monitoring were regressed with scores compliance to payment. The table below shows this effect.

**Table 15 Multiple Regression results of community participation Vs Compliance to payment**

| Model | R                | R square | Adjusted R square | Std. Error of the estimate | Sig.             |
|-------|------------------|----------|-------------------|----------------------------|------------------|
| 1     | .57 <sup>a</sup> | .41      | .42               | 2.90648                    | .02 <sup>a</sup> |

**a. Predictors: (Constant) Participation in planning, pricing, monitoring**

**b. Dependent variable: compliance to payment**

The multiple regression summary in Table 15 shows that overall correlation (linear relationship) between compliance to payment (dependent variable) and community participation is  $r=0.56$ . This implies that, generally, community participation is positively related to compliance to payment. The relationship was significant at  $p\text{-value} < 0.05$ . This means that community participation in water services planning, pricing and monitoring can significantly increase their compliance to water services payment. The results of the regression model indicated an R-square of 41%. This implies that on average, community participation can explain about 41 per cent of compliance to waters services payment. This means that community participation has a significant effect on compliance to payment and therefore water services companies should have mechanism for enabling community participation if they are to increase their revenue collection.

Findings from secondary sources reveal that the Ugandan urban water subsector is one of the sectors that have not yet embraced a dedicated multi-stakeholder consultation process at water management even after a range of research that has proved that community participation enhances sustainability and ownership. The process of setting the tariff in NWSC proposes a representation of the communities through their respective Members of Parliament, who approve a final uniform water tariff charges for all areas under NWSC management (NWSC statute, 1995). NWSC Water tariffs have been adjusted four times during the period 1996–2003 (Salman, 2008) but with no direct involvement of the community. The water sector guidelines also do not guarantee the involvement of

water users. Although such guidelines call for a consideration into the consumer interest, it does not guarantee water users' contribution at planning, pricing and monitoring.

In addition, numerous recommendations often relying on simplistic 'standard' panaceas have been put forward for water governance reform without testing their appropriateness in diverse contexts (Pahl-Wostl et.al, 2012). Some practitioners, who have worked with participatory approaches for decades, note that there is widespread disillusionment amongst themselves, community and the wider public, despite the literature available regarding how, when and why to adopt participatory approaches (SERG 2007). Often there is no consistency in data sets maintained by different agencies, which causes difficulties in negotiations (Gooch & Stalnacke, 2013).

## CHAPTER FIVE

### DISCUSSION, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a discussion, conclusion and recommendations of the study that examined the influence of community participation in water services planning, pricing and monitoring on compliance to payment for the services. A discussion of the findings is presented first, followed by a conclusion and finally by recommendations for action and further research.

#### 5.2 Discussion

##### 5.2.1 The effect of Community participation in planning for water services on compliance to payment

The first objective of the study was to determine the effect of Community participation in planning for water services on compliance to payment. The findings revealed that community participation in planning for water services positively contributes ( $r^2=0.29$ ) compliance to payment for water services. As indicated by Mugumya (2013), the contribution could have been higher if community participation was high. The findings showed that there was some community representation in the planning of water services, through the local water services committee. Participation was not very inclusive. Representation was limited to LCs and Business representatives, who don't fully present the needs of the community to NWSC. A communication gap between the technocrats and the community also existed. This findings agreed with Gooch and Stalnacke, (2013) who note that it is still difficult to have meaning community participation in water service planning because of the policy challenges involved in securing it. In water services meetings, the technocrats from NWSC withhold important information from the community representatives which they can use to make a meaningful contribution to the planning process. This makes it difficult for the community members

to present their needs. NWSC uses technical language that is difficult to understand by the community representatives. As a result community participation is just perfunctory. So no significant contributions are made. This scenario makes it very difficult for the community representatives to participate in the pricing and monitoring of water services. This has resulted to alienation for the community and lowered compliance to payment for water services. The community feels that NWSC is there out to fleece them and so many only pay bills after being disconnected.

### **5.2.2 The effect of Community participation in pricing for water services on compliance to payment**

The second objective of the study was to find out the effect of community participation in pricing for water services on compliance to payment. The findings revealed very low ( $r^2=.16$ ) but positive influence of community involvement in the pricing and billing of water services on compliance to payment for water services. This was probably due to low community involvement in the pricing and billing of water services. NWSC does not fully involve customers in determining the price and billing system of water services. As indicated by Bijlsma, Bots, Wolters, & Hoekstra, (2011), when customers feel that they have been left out of pricing they think that the service provider is out to cheat them. This reduces community's willingness to pay for the waters services. Razzaque, (2009) adds that very few customers subsequently pay their bills promptly or in advance, though they would have the ability to pay. This because the community feels that transparency in pricing and billing is non-existent (NCC, 2010).

### **5.2.3 The effect of Community Participation in Waters Services Monitoring on Compliance to Water Services Payment**

The last objective was to assess the effect of community participation in waters services monitoring on compliance to water services payment. The findings showed a low ( $r^2=.11$ ) but positive influence of community participation in water services monitoring on compliance to water services payment. This shows that community participation can significantly increase community compliance with water services payment (SERG, 2007). However, the contribution was low due to very little community involvement in water services monitoring. Findings revealed that NWSC has no time table for monitoring of waters services by the community. Monitoring tools and guidelines were not also available. Gooch and Stalnacke (2013) said that this shows lack of good structure and planning for monitoring yet, Yang and Callahan (2007) showed that monitoring can only be effective if it is well planned and has tools and objectives. The available mechanism of monitoring is very weak and rarely implemented. Findings revealed that monitoring is done by mouth. No checklist to guide monitoring and no preset parameters to monitor. There is need to provide for a checklist and tools to guide monitoring of service provision. This scenario contributes to low compliance to payment of water services, because respondents do not have ownership of the project. The findings agrees with the study by Compliance Advisor/Ombudsman (CAO), 2008 which stated that “by giving stakeholders input, directly addressing their concerns, and fostering participation, participatory monitoring helps generate a sense of ownership and responsibility, thereby increasing social capital and diffusing possible sources of conflict”.

### **5.3 Conclusion**

The findings reveal that the current community participation in water services planning in Kitgum is not very inclusive and many times does not achieve its intended purpose. The few community representatives, don't fully present the needs of the community. This has created a very big communication gap between the NWSC and the community. NWSC withholds important

information from the few community representatives during waters services meetings. This has made current community participation to be only perfunctory. Representatives do not have the information and the capacity to make contributions that represent the interested of the community.

There is also no community involvement in the pricing of water services. Customers are only sent water bills and they do not know how it is arrived at. Majority of customers feel that NWSC is cheating them and meters are not accurately read. Complaints about the accuracy of pricing and billing are on the increase. This has resulted into low compliance to payment of bills. Very few pay their bills promptly or in advance, though they have the ability to pay. The community feels that transparency in pricing and billing is non-existent.

It was also evident that very little community involvement in waters services monitoring exists. There is no time table for monitoring of waters services by the community. Monitoring tools and guidelines are not there which makes meaningful monitoring difficult. The current monitoring is done by mouth. There is no checklist to guide monitoring and no preset parameters to monitor. There is need to provide for a checklist and tools to guide monitoring of service provision.

#### **5.4 Recommendations**

In view of the findings, the following recommends are made;

##### **Community participation in waters services Planning**

A larger section of the community is left out by the limited representation of the LCs and business community. Representation in planning should be expanded to include most of the sections of the community such as women, people with disabilities, farmers and so forth.

In the planning meetings the NWSC technocrats should use a down to earth language so that they can reach even those who are not well educated or those who do not understand the technical terms.

Programs to empower the community with effective participation and engagement techniques are needed in this area. These will raise the community's capacity to effectively participate in the management of utilities services in their areas.

### **Community participation in water services pricing**

Mechanisms should be put in place to involve the community representatives in pricing and billing water. Meter reading should be done in the presence of a representative of the home.

NWSC should guide the community in understanding the reading of the water meter and calculation of the water bill. Community meetings on the constituents of the water meter price should be held regularly.

Changes in water tariffs should be communicated in advance to the community using a far-reaching forum.

### **Community participation in water services monitoring**

Currently, there are no guidelines on community participation in monitoring water services. These should be written and effectively distributed by both central and local governments.

A tool that contains monitoring guidelines for community participation should be written and explained to the community.

The community should be empowered through community seminars to do water services monitoring.

### **5.5 Recommendations for Further Research**

The researcher recommends that further research should be carried out on appropriate strategies to develop effective community participation in water services management.

A study should also be done on how to effectively empower the community to participate in water services management.

A model of community participation in water service participation which could be relevant to Uganda should be investigated.

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Annex I Kitgum Town Council – Draft UBOS population report, 2014

| S/N | Village                | Total Popn  | H/H         |  | S/N | Village                | Total Popn    | H/H         |
|-----|------------------------|-------------|-------------|--|-----|------------------------|---------------|-------------|
|     | <b>TOWN PARISH</b>     |             |             |  |     | <b>WESTLAND PARISH</b> |               |             |
| 1   | Central                | 666         | 138         |  |     | <b>West land A</b>     |               |             |
| 2   | Apollo                 | 1228        | 320         |  | 17  | First Jenge            | 3228          | 692         |
| 3   | Langalanga             | 813         | 127         |  |     |                        | <b>3228</b>   |             |
|     | <b>SUB TOTAL</b>       | <b>2041</b> | <b>585</b>  |  |     | <b>West land B</b>     |               |             |
|     |                        |             |             |  | 18  | West village           | 3832          | 925         |
|     | <b>ALANGO PARISH</b>   |             |             |  | 19  | Prison                 | 263           | 42          |
| 4   | Alango West            | 1845        | 342         |  | 20  | Police                 | 396           | 55          |
| 5   | Alango East            | 1184        | 207         |  |     | <b>SUB TOTAL</b>       | <b>4491</b>   | <b>1714</b> |
| 6   | Camcam                 | 1523        | 281         |  |     |                        |               |             |
| 7   | TangiAgoro             | 395         | 60          |  |     | <b>PONGDWONGO</b>      |               |             |
|     | <b>SUB TOTAL</b>       | <b>4947</b> | <b>890</b>  |  |     | <b>Pongdwongo</b>      |               |             |
|     |                        |             |             |  | 20  | Pager                  | 2073          | 433         |
|     | <b>GUU PARISH</b>      |             |             |  | 21  | Nyikinyiki             | 1393          | 265         |
|     | <b>Guu B</b>           |             |             |  |     |                        | <b>3466</b>   |             |
| 8   | East ward A            | 1741        | 394         |  |     | <b>Green land</b>      |               |             |
| 9   | East ward B            | 1963        | 577         |  | 22  | Lemo West              | 751           | 128         |
|     |                        | <b>3704</b> |             |  | 23  | Lemo East              | 3276          | 608         |
|     | <b>Guu A</b>           |             |             |  | 24  | Lemo South             | 1312          | 298         |
| 10  | Ginnery                | 1480        | 371         |  |     | <b>SUB TOTAL</b>       | <b>5339</b>   | <b>1732</b> |
| 11  | OryangOjuma            | 1240        | 249         |  |     |                        |               |             |
|     | <b>SUB TOTAL</b>       | <b>2720</b> | <b>1591</b> |  |     | <b>PAGER PARISH</b>    |               |             |
|     |                        |             |             |  |     | <b>Pager B</b>         |               |             |
|     | <b>PANDWONG PARISH</b> |             |             |  | 25  | Ayul A                 | 1428          | 347         |
| 13  | Auch                   | 3171        | 653         |  | 26  | Ayul B                 | 3110          | 706         |
| 14  | Gangdyang              | 1546        | 321         |  |     |                        | <b>4538</b>   |             |
| 15  | Pandwong               | 1221        | 261         |  |     | <b>Pager A</b>         |               |             |
| 16  | Bardege                | 1726        | 371         |  | 27  | Lamit-kapim North      | 1103          | 226         |
|     | <b>SUB TOTAL</b>       | <b>7664</b> | <b>1606</b> |  | 28  | Lamit-kapim South      | 1223          | 257         |
|     |                        |             |             |  |     | <b>SUB TOTAL</b>       | <b>2326</b>   | <b>1536</b> |
|     |                        |             |             |  |     | <b>GRAND TOTAL</b>     | <b>44,546</b> | <b>9637</b> |



|    |   |  |  |  |  |  |
|----|---|--|--|--|--|--|
| 10 | The community always participates in setting water services tariffs   |  |  |  |  |  |
|    | <b>Participation in Water Services Monitoring</b>   |  |  |  |  |  |
|    | I take part in monitoring budgets implementation of water services by NWSC  |  |  |  |  |  |
| 11 | I take part in monitoring revenue collection of water services  |  |  |  |  |  |
| 12 | I participate in monitoring other customers to ensure that they perform their obliged duties towards water services |  |  |  |  |  |
| 13 | I am involved in monitoring the quality of water services   |  |  |  |  |  |
| 14 | I am consulted to contribute to improvements in water service provision through participation in water monitoring   |  |  |  |  |  |

### Section C: Compliance to water services Payment

Please tick according to your level of agreement.

Strongly Agree =1, Agree =2, Not Sure =3, Disagree =4, Strongly disagree =5

|  |  | Strongly agree<br>(1) | Agree<br>(2) | Not sure<br>(3) | Disagree<br>(4) | Strongly disagree<br>(5) |
|--|--|-----------------------|--------------|-----------------|-----------------|--------------------------|
|  | <b>Willingness to Pay</b>                                    |                       |              |                 |                 |                          |
|  | I'm willing to pay for my water bills                        |                       |              |                 |                 |                          |
|  | I feel a sense of ownership for water services               |                       |              |                 |                 |                          |
|  | I appreciate the need to pay for the water bills promptly    |                       |              |                 |                 |                          |
|  | I'm willing to pay the recommended water tariff              |                       |              |                 |                 |                          |
|  | <b>Tariff structure and rate</b>                             |                       |              |                 |                 |                          |
|  | The tariff structure favors both the poor and the rich       |                       |              |                 |                 |                          |
|  | I'm comfortable with the current water services pricing      |                       |              |                 |                 |                          |
|  | I can accept an increase in the water tariff                 |                       |              |                 |                 |                          |
|  | I would propose changes in the current water services tariff |                       |              |                 |                 |                          |
|  | NWSC sets high tariffs in exaggeration of costs              |                       |              |                 |                 |                          |
|  | <b>Bill settlement</b>                                       |                       |              |                 |                 |                          |
|  | I pay my water bills immediately I get my bill               |                       |              |                 |                 |                          |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  | I pay my bills after they disconnect the water                             |  |  |  |  |  |
|  | I always pay my water bill in advance                                      |  |  |  |  |  |
|  | I pay after a disconnection warning from NWSC                              |  |  |  |  |  |
|  | I encourage other customers to pay their water bills in time               |  |  |  |  |  |
|  | I am comfortable with the frequency of water bills from NWSC               |  |  |  |  |  |
|  | I am comfortable to pay my bill using whatever channels instituted by NWSC |  |  |  |  |  |
|  | <b>Ability to pay</b>  |  |  |  |  |  |
|  | I can afford to pay the water bill   |  |  |  |  |  |
|  | I often take a soft loan to pay my water bill                              |  |  |  |  |  |

End-Thank you

### Annex 3: INTERVIEW AND QUESTION GUIDES

#### **INTERVIEW GUIDE FOR SEMI-STRUCTURED INTERVIEW AND QUESTION GUIDE FOR THE FOCUSED GROUP DISCUSSION**

I'm a student conducting a research study as an academic requirement in partial fulfillment to the award of masters of organization, public policy and management of Kyambogo University. The questionnaire is intended to facilitate the study on community participation in the water service provision; a case study of Kitgum town. The information provided for this research will be purely for academic purposes and the recommendations made will be important to the improvement of water service provision. The information here will be treated with utmost confidentiality and the result of the study may be communicated to you at your wish.

1. Do you involve the community in planning, budgeting and monitoring of water service provision?
2. In your opinion, what factors hinder the participation of community in planning and budgeting for water services?
3. Does the community pay their water bills?
4. Is the community willing to pay for their water bills?
5. Does the community have a sense of ownership of the water services?
6. Does the community pay their bills in advance?
7. Does the community assume water as a free good?
8. Does the community have the ability to pay water at the current tariff?
9. Is in-kind contribution by the community considered as a channel in revenue collection?
10. Does the community appreciate the concept of "higher consumption" – "higher pay"?
11. Does the community apply to the monthly billing routine?

End-Thank you