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Flowing Power in the Community:
How decisions are made and their consequences
for water accessibility in Western Kenya

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Abstract

Water resources management has been reconfigured over time and space; as power over decision-making processes has increasingly been vested from the state and distributed among networks of private and non-governmental actors. Geographical scholarships of environmental governance seek to critically analyse this transformation in order to grasp how decisions are made, and the consequences that entail in the structure and delimitation of how different groups access natural resources. The present study will depart from this framework to analyse an empirical study of a community water resources management project in Kenya. Furthermore, the framework is supported by critical scholarships of community and participation, gendered discourses on spatial subjectivities, along with the notion of nature's role in projects of water resources management, to ensure a holistic approach to the case at hand. The data was collected during two months of fieldwork applying both qualitative and quantitative methods, used in a narrative analysis of decision making processes regarding the distribution of water, and the consequences of these decisions in terms of accessibility to water analysed through GIS. The findings of the study show how interests of particular actors drive and shape decision-making processes regarding distribution, where benefits from access to clean water is not equal for all social groups.

Keywords: environmental governance, community, participation, gender, water resources management, Kenya

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Acronyms

CBO	Community Based Organisation
GIS	Geographical Information System
GWP	Global Water Partnership
KSH	Kenyan Shillings
LVNWSB	Lake Viktoria North Water Services Board
LCRC	Lugari Community Resource Centre
MCWP	Musembe Community Water Project
WHISCA	Willing Hearts International Society Canada

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1 Introduction

Management of water resources has long been an issue of debate in social sciences and the different ideas of how water is and should be managed has changed over time and space. Nonetheless, the importance of this management cannot be stressed enough as no matter where on earth you are, every life is depends on water. The significance of water has also been acknowledged by development agencies through recognising access to clean drinking water not only as a human right, but also as a prerequisite for realising other human rights (United Nations, 2010). Due to the importance of water, one could argue that we should never stop questioning and discussing how the intervention, treatment and distribution of this resource is executed.

The field of human geography has also been occupied with water scholarships. Recently, the concept of environmental governance has been adopted by human geographers to critically asses current management of natural resources, such as water, in the light of neoliberal globalisation. The concept is especially drawing attention to the changing structures governing resources, a tendency where responsibilities are being redistributed from the state to private actors (Bridge and Jonas, 2002, McCarthy and Prudham, 2004). As power structures are reconfigured and natural resources are governed in increasingly complex networks, the concept of environmental governance is applied to discuss how this may affect responsibilities in decision processes and eventually the outcome for the various social and economic groups who are affected. 'In further pursuing analyses of the practices of neoliberal environmental governance through critical ethnographic methods, geographers will gain a fuller and more nuanced understanding of how actual resource/environment decisions are being made, by whom, for whose benefits, and within the contexts of what power asymmetries' (Himley 2008:446). Placing water resources management in a larger development framework, attention should be drawn to the Global Water Partnership (GWP), a cross-organisational initiative founded in 1996 by the United Nations Development Programme, the World Bank and the Swedish International Development Cooperation Agency. In line with the reconfiguration of how resources are managed, the GWP's main objective is to promote integrated water resources management, and they

emphasise that ‘the network is open to all organisations involved in water resources management: developed and developing country government institutions, agencies of the United Nations, bi- and multi-lateral development banks, professional associations, research institutions, non-governmental organisations, and the private sector’ (Rogers and Hall,2003).

One of the member countries of the GWP is Kenya. In the light of liberal globalisation, the Kenyan state was largely influenced by the structural adjustment programs implemented by the World Bank and International Monetary Fond throughout the African continent in the 1980s (Mosley et al., 1995). The consequences of these programs can also be found in the water resources management where the private sector is increasingly taking over management of water, a service that was once restricted to public affairs (Mwaura, 2007). In the western part of Kenya, the largest community driven water project in the country is in the final planning stage. The project is located in the Musembe sub-ward of the Kakamega county, and was started in 2011 by a community based organisation (CBO) who raised funds partly from international donors and partly from the Kenyan government. The Musembe Community Water Project (MCWP) is in a water scarce area where people walk long distances to fetch water, therefore it is expected that the project will have a major impact on the social and economic dynamics in the area (LVNWSB, 2014).

The notion of community driven projects is often praised in development discourses, as it is rooted in the idea to empower the beneficiaries of development projects to ensure that they take part in the decision-making processes, which may eventually impact their livelihoods. One of the pillars supporting this is the concept of participation, is believed to create a notion of local ownership (Chamber, 1983, World Bank, 2000a). The tendency to romanticise the community, and assuming that such can be characterised as one unified group where members participate on equal terms, is problematic as it blindly accepts local power structures that may interact with who participates, on what ground and with what means (Sultana, 2009). Another trend in development scholarships has been the focus on inclusion of women in projects with the purpose of empowerment. The conceptualisation of women however, is often

inadequate as class and background is forgotten, and consequently, it is assumed that a well-off woman or man can speak on behalf of women or men at the bottom of the social ladder (Cleaver, 2000). The notion of participation is not only gender blind, it is also showing incompetence in respect to the spatialities of participation in community projects. Meetings in community projects are often taking place in public space, a space where not all women and men feel comfortable with speaking freely (Kesby, 2005). Finally, there is one more concept which, literature focusing on community projects usually neglects; the idea of nature as an agent that shapes and impede on projects of natural resources management. Nature is often reduced to a 'thing' of which humans can use for their own benefit (Whatmore, 2002), however, water's biophysical characteristics can disrupt and influence the feasibility of a project. This could be in relation to insufficient aquifer where water is supposed to be drilled, or the large scale investments required for transportation of water (Bakker, 2003). Furthermore, the relation between people and water may vary, as water may be playing a different role for a person who can open a tap for water access compared to a person who has to walk 30 minutes, while carrying 20 litres (Sultana, 2009).

Even though the notion of community driven projects may lead one to think that the entire community has reached a consensus on how water resources should be managed, it should be stressed that there are not necessarily democratic processes underlying these decisions, thus, one should not take labels for granted but instead remember the ambiguous nature of *community based organisation*. In Musembe, the CBO states that the project is to benefit for the community as a whole, however, the objective of this thesis is to look beyond such statements in order to find the underlying power structures that determine accessibility.

1.1 Research Objectives

In the pursuit of understanding water resources management in a specific context, I conducted a two months field study in Musembe. The main question guiding the research was: *How is power spatially articulated in the coverage area of the MCWP?*

Through this question, I aim at encapsulating two variables of special interest,; power vested in decision making and the distribution of water. Firstly that the notion of power is referring to the processes of decision-making. This, however, does not mean that the analysis will solely pay attention to whom take the actual decisions, but will also focus with regards to the spatiality of where the decisions are taken. Furthermore, some decisions have been made and negotiated back in time, and by several actors, whom each have a story to tell. In respect to this, the aim of the analysis will not be to find a single truth, but rather view the different narratives as multiple truths depending on whose ears and eyes they were recorded through. The decisions that will be within the scope of this thesis will be related to the actual distribution of water, which leads to the clarification of the second notion of spatial articulation. The rationale behind choosing distribution of water as a main focus is predominantly due to the fact that distributing clean water to people is the main objective with the MCWP. Therefore, understanding the processes driving the decisions on how this should be operationalised is central to critically analyse the MCWP. Furthermore, as the field study is limited both in terms of time and recourses, my aim was to find a tangible object in which both power and actual outcome could be studied; I found that the actual distribution of water met this requirement, as the geographical outline of pipes and water kiosks determine how people can access the water, and result in an equal or unequal accessibility. In order to operationalise the research question the following questions will be used supplementary: How will water be distributed?; What actors have been involved in the decisions regarding the distribution?; How will the distribution cover the area in relation to where people live?

The questions are inspired by the concept of environmental governance, that has of prime concern to critically analyse resource management; the powers situated within the decision-making of this management, and how it will affect accessibility in relation to different social groups. In order to fully grasp the case at hand, the concept will be assisted by the critical scholarships of community and participation. Furthermore, the analysis will draw on contributions from gender scholarships on participation and spatialised subjectivities. In order to analyse the consequences of the distribution of

water, the conceptual framework will also engage in a discussion on the role of nature. People's relation to water, will be viewed from the perspective of women, as they have the key role in the interaction with water during everyday life; i.e. they are mainly in charge of domestic work including fetching water, treating it, using it for cooking and cleaning. The thesis will be structured to start with a discussion of the conceptual framework. This will be followed by an introduction of the context and case, in which the research was conducted, and which is necessary in order to understand the methodological discussion. Finally the findings will be analysed and discussed.

2 Conceptual Framework

The conceptual framework for the present thesis has its roots in the concept of environmental governance. Himley (2008) presents a literature review of the concept, focusing on the growing environmental governance scholarship in the field of human geography. The following section will discuss the concept, taking departure in his review. Due to the relative youth of the scholarship, the concept will be contextualised in relation to other human geographical scholarships constituting the major pillars from which environmental governance has been build upon. As the reader will see, three other concepts, briefly touched upon the introduction, will be further discussed. These are carefully chosen with respect to the case study at hand and will be used to ensure a more holistic analysis.

2.1 Environmental Governance

The interest in environmental governance from a geographical perspective accelerated at the beginning of this millennium with a number of journals dedicated to the concept (Bridge and Jonas, 2002, McCarthy and Prudham, 2004). The general argument put forward focuses on neoliberal globalisation's impact on natural resources management, through analysing how the global spread of neoliberalism has influenced how relations of society-environment are governed. 'In the process, geographers have stressed the interests served by these reconfigurations as well as how governance

arrangements are contested and struggled over by differentially empowered social and political actors (Himley, 2008:424). In his literature review, Himley goes on to argue that the concept is used as a critique of how resources management is often equated with the actions of the state, an argument which is also presented by Bakker and Bridge (2007).

The transitional role of the state is a central concern in this discourse, i.e. how governance of natural resources has transformed from being a matter of state-centric regulation to being a network of both public and private actors. This idea of governance, draws on the works of Rhodes (1997), Painter (2000) and Jessop (2002) where governance is referred to forms of inter-organisational networks, in contrary to hierarchal or market structures. Furthermore, governance does not merely cover the acts of government but goes on to include non-state actors. Broadening the understanding of governance, however, shifts and obscures the boundaries between public, private and voluntary sectors (Rhodes, 1997). In this framework, non-state actors are given a significant amount of autonomy from the state, and according to environmental governance scholars, this have consequences for the power vested in non-state actors that are implementing public policy, such as private firms, NGOs, and CBOs. This 'destatization of the political system' (Jessop, 2002:199) is central to how the concept of environmental governance understands the notion of governance. Regarding resources management, Bakker and Bridge (2007) note how power has been decentralised as non-state actors take over decision-making. According to Himley (2008:435), this should be viewed in light of neoliberal policies which 'have emphasized public–private 'partnerships' and market-based mechanisms as means to achieve 'efficient' resource use and allocation'. As presented in the introduction, such processes have taken place in Kenya.

The foundation of environmental governance scholarship has several trails back to other geography discourses. One example is political ecology as it 'seeks to understand the complex relations between Nature and Society through careful analysis of social forms of access and control over resources (Peet and Watts, 2004:4), along with the concern of how access and control over resources are structured through

institutions. Environmental governance scholars have also found inspiration of theoretical tools applied by economic geography in institutional frameworks (Bridge and Jonas, 2002, McCarthy and Prudham, 2004). Finally, the scholarship of environmental justice should be emphasised as an influence in the development of environmental governance. Generally speaking, this scholarship is concerned with ways in which resources are distributed, with regards to class, gender, race and ethnicity, thus environmental politics and social justice are viewed as inseparable (Gregory et al., 2011). Importantly, environmental justice has given attention to how individuals, cooperations and institutions have excluded communities in access, control and decision-making processes over natural resources (Neumann, 1998). Starting as a social movement, literature on environmental justice has also contributed to the understanding of how social movements participate, contest and shape resource management, along focusing on the role of government arrangements and how these may reproduce social relations through structural inequalities in relation to vulnerability to environmental threats, and control and access to natural resources. A final note on the contribution of environmental justice scholarship should be left to the attention given to the sociospatial aspects of unequal distribution of environmental benefits and costs (Bullard and Johnson, 2000, Pulido, 2003). The role of non-state actors is central in several analyses of environmental governance; examples of this are found in works of McCarthy (2005) and Perreault (2006). Taken from different parts of the world, both examples suggest how social movements may contest neoliberal environmental governance, through either putting civil pressure for the alteration of public policy or establishing alternative bodies for decision-making.

Building on the discourses mentioned above, environmental governance scholarship has contributed to the discussion on how institutions, cooperations and individuals impact resource access and control. However as Himley notes, another dimension is taken into consideration, namely ‘how the biophysical properties of natural resources and ecological systems impinge on and shape the organizational and institutional systems though which they are governed’ (2008:440). One example of this is seen in Bakker’s (2003:440) analysis of water privatisation, where water is not

merely discussed as a natural resource, but she also acknowledges water's 'uncooperativeness' as a resource and commodity. This characteristic is emphasised in relation to property rights as these are difficult to establish since water is not static but a flowing resource and furthermore, necessary to life. Bakker (2003:48) goes on to argue that the nature of water, being both heavy and complicated to transport, is inclined to end up in monopolistic control as large investments are required for the management of the resource.

Analysing resource management in a holistic and critical way is essential in the application of the concept of environmental governance. As Himley (2008:435) notes, 'the concept of environmental governance has supplied geographers with an analytical category with which to examine the multiple and overlapping organizational, institutional, and epistemological systems through which access to natural resources is now structured/negotiated and decisions regarding resource use and environment management are now taken'. This rescaling of environmental governance is seldom a harmonic process, on the contrary, it is a political and contested process where interests of specific groups steer the reconfiguration of how resources are managed, and eventually how these resources are socio-spatially accessed (Bridge and Jonas, 2002, Bakker and Bridge, 2007). In order to analyse the process of scalar reconfiguration, Bakker (2007) suggests that attention should be given to the practices through which resource exploitation is constructed and administered. In addition to this, Himley (2014) argue that such analysis should not only pay attention to organisational arrangements governing natural resources, but include scrutiny of the specific historical-geographical environments in which particular actors practice resource management. This conclusion has been reached through his study on corporate social responsibility in a Peruvian mining company, where he found that the *geography* of decision-making process influenced the inclusion of certain groups, as this took place in the headquarters of the mining company, hidden away behind large and guarded gates. Even though community representatives were invited to meetings concerning the decisions regarding environmental and social consequences of mining, this opportunity was not realised as the community members experienced the spatial surroundings hostile. As the literature

on environmental governance suggests, we need to scratch the surface of environmental governance in order to critically grasp how decisions regarding resources are being made, within what power structures, by what actors, and for whose benefits.

2.2 The Role of Nature in Water Resources Management

In the previous section the role of nature, and in this particular case water, is briefly introduced as an active player in environmental governance. I find this discussion important as nature's agency is often ignored in development discourses, where the conceptualisation of nature is generally reduced to either a source of raw material in resource management or as a source of danger in studies on hazards, where nature is usually characterised as unsafe or hostile (Peet and Watts, 2004, Wisner et al., 2004). This is not to say that critical studies on nature's materiality and ontology is not to be found, as seen in the example above of Bakker's work on water's heterogeneity or in the works of Whatmore (2002) on hybrid geographies. Whatmore (2002:2) addresses the separateness of nature and society in geography scholarships. This ontological separation is underpinning not only the realms of academia, but also policy making, media and everyday live, leaving nature as 'a physical place to which you can go' Consequently, nature is perceived as a 'product of human interpretation, and analysis becomes fixed on the representational practices that make it meaningful'. In order to disrupt this disposition to view nature-society in terms of binaries, Whatmore (2002:3) calls for a 're-cognition of the intimate, sensible and hectic bonds through which people and plants; devices and creatures; documents and elements take and hold their shape in relation to each other in the fabrication of everyday life'.

The practical counterpart to this theoretical discussion is among others found in studies on community projects among others. One example is found in Sultana's (2009) work on arsenic water contamination in Bangladesh. In here, Sultana emphasises that attention to the 'lively materiality' of nature opens up a for a deeper understanding of how components of nature can influence processes of development. In this particular case, Sultana found that how people accessed water, and ways in which they saw problems of water contamination influenced the narratives about the success and

failures in community projects of water resources management. Furthermore, the biophysical characteristics of water came to disrupt social powers, as the politics of water location decisions where constricted by the aquifer levels or arsenic-contaminated areas. As a consequence, 'the heterogeneity of nature and its spatiality can influence whether or not people partake in externally-driven / funded community water projects' (Sultana, 2008:351).

2.3 Community and Participation

As the MCWP is initiated and managed by a community based organisation, it is important to discuss how *community* is understood for the analysis to go beyond superficial definitions. The following will be an attempt to present such a discussion from a theoretical point of view, i.e. how the notion of community has been discussed in different academic circles through time. The idea of community driven development has won popularity since the 1970s, where scholars as Robert Chambers (1983) criticised mainstream development of failing in considering the beneficiaries when planning development strategies. Instead, bottom-up approaches was advocated to be implemented through participatory methods thereby handing-over the decisions to 'the poor'. This idea goes hand in hand with the notion of empowerment, which was highly influenced by the the works of Amartya Sen's (1985) capability approach. Both approaches made their way to the big development agencies, as exemplified in the World Bank's Development Report from 2000 (World Bank, 2000a) where empowerment is a key priority in development strategies.

There are many potential benefits of community driven development as the immediate objective is to create agency for the beneficiaries through participation of the community, thereby reversing power structures and allowing 'community members' more control over how development assistance is used in their particular area. These benefits, however, rely on how the notion of community and participation is conceptualised. This process, according to Mansuri and Rao (2004:8 emphasis in original), is left unexplored as 'most literature on development policy uses the term *community* without much qualification to denote a culturally and politically

homogeneous social system or one that at least implicitly is internally cohesive and more or less harmonious entity'. Such treatment of 'community' is problematic as the result may be a reinforcement of existing unequal power relations, when historical, social and political contexts are ignored (Mehta, 1997). The lack of attention to local power structures is also a central concern of John Harriss' critique of how the World Bank (2000b) applied the concept of social capital, coined by Robert Putnam (1993). Harriss (2001) argues that the de-linking of social relations and power fails to recognise how people situated in the better half of the hierarchy may have better networks than others, which can be used to reinforce existing power structures. These ideas are not novel, as they can be traced back to the works of Pierre Bourdieu (1990), who emphasises the elite's access to more powerful external and internal social networks as contributing to reproducing inequality.

Another buzz-word within development discourse is participation. Cooke and Kothari (2001) argue that the concept of participation has reached an hegemonic status in development where it is advertised as a way to establish the feeling of ownership towards projects. The enthusiasm for the concept is even seen in the 2014 Human Development report from UNDP where participation is emphasised as a key instrument in reducing current challenges as 'participation has helped build social cohesion by instilling habits of cooperation, solidarity and public spiritedness' (Malik 2014:109). Sultana (2009:349) argues that, in reality, organisations and projects that claim to be participatory are often characterised by being socio-economically inequitable, as representation is generally determined by patronage networks and kinship structures. 'As a result, participation is a process that involves conflict and consensus, within broader historical factors and constraints, and not just a mechanism to facilitate project success or a set of techniques, although this is primarily how it has been treated in most development projects'.

2.4 Gender and Spatialised Subjectivities

Building on the concepts of community and participation, the following discussion will focus on the gendered dynamics of these concepts. Furthermore, the

gendered spatialities of the processes of community and participation will be discussed as well. The reason behind the application of a gendered analysis is based on the idea that this application opens up for an understanding of the structural inequalities underlying community projects and ways resources are used and allocated in households. Furthermore, participation of women and men in community projects should be analysed in terms of influence in decision-making processes and benefits accumulated to them through this participation (Rico, 1998, Agarwal, 2000, Cleaver, 2000).

An example of this is found in a study by Cleaver and Elson (1995) investigating gender awareness in water resources management on the community level. Cleaver and Elson (1995:3) argues that the privatisation of water management has a negative influence on women's position of power as water management comes to revolve around 'cash and committees' resulting from the commodification of water and meetings becoming the arena for decision-making. As women generally have less access to cash, and more time tied up in household chores, the parameters are found to be biased against women. Including the notion of gender, however, should not stop at the division of women and men, as it is problematic to assume that women and men with various backgrounds (e.g. culture, economic, status), can speak on behalf of each other (Mohanty et al., 1991). Generalising the conceptualisation of women and men becomes problematic as 'gendered subjects experience simultaneous processes of inclusion and exclusion based on other social processes, and thus it is not possible to generalise across all women or even men' (Sultana, 2009:349).

The fascination of participation in development discourses has already been discussed above, but does require some additional attention since the idea is commonly expanded to include that women are increasingly empowered through participation. Agarwal (2001), however, points to the weaknesses of this conviction as it is insensitive to the heterogeneousness of participation, i.e. who is participating, with what means and to what extent and outcome. Agarwal (2001) goes on to argue that institutions, which are suppose to be inclusive, may actually cause 'participatory exclusions' as they may constrain women's participation in resource management referring to the social norms

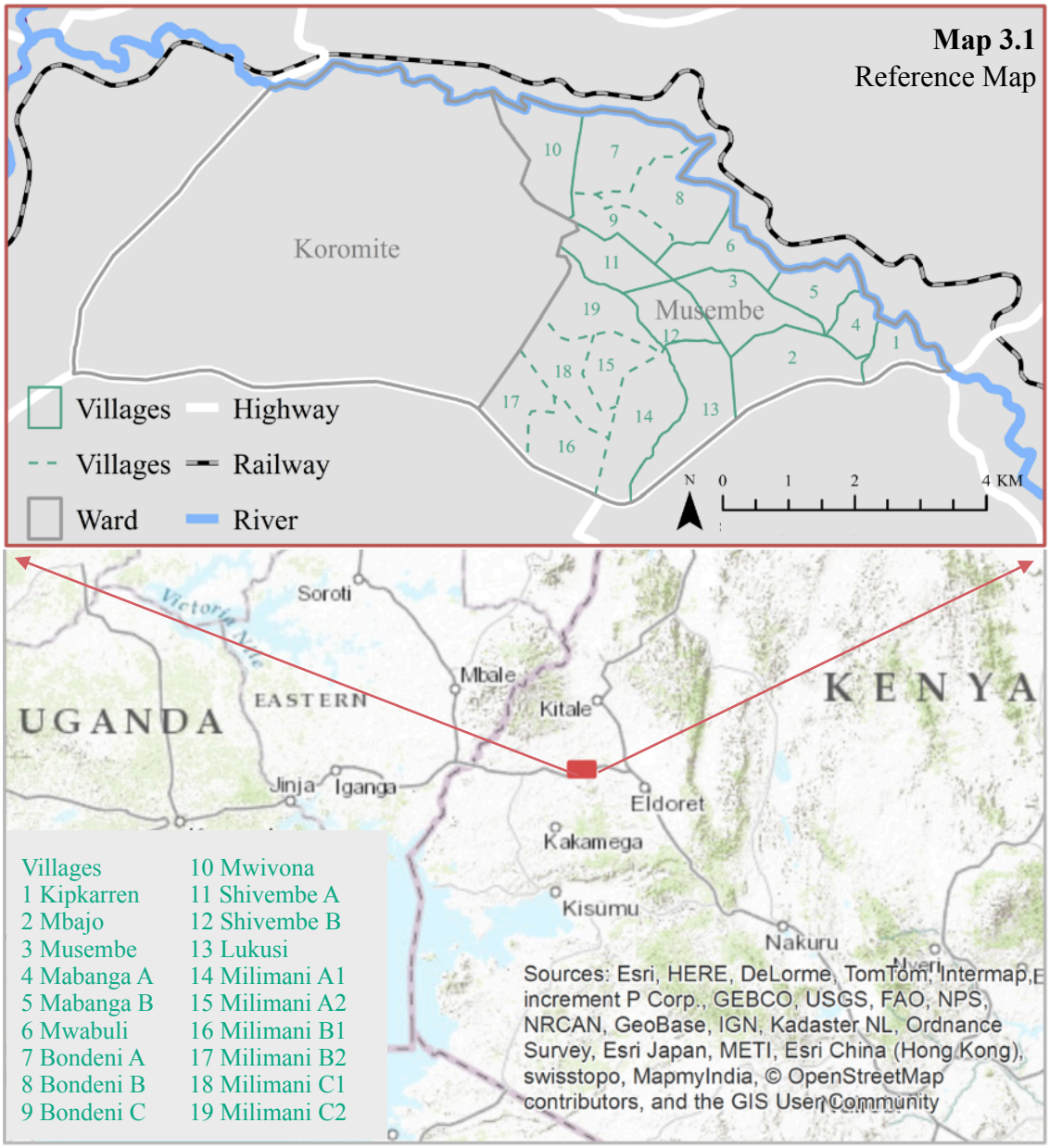
of how women should act and behave (e.g. in public, domestic work), personal attributes and endowments (e.g. levels of education), domestic attributes and endowments (e.g. class) and rules of entry. Furthermore, one should acknowledge the spatiality of participation, as it is a process occurring in gendered places and spaces. Due to spatialised subjectivities, people may act differently in different spaces and even be discouraged from speaking in public (Kesby, 2005). Sultana (2009:350) also places emphasis on the spatiality of participation and argues that 'these gendered subjectivities and identities are shifting, contested and rethought in development projects so that they make sense to each individual in what it means to be a 'good' man or woman, husband or wife, son or daughter, within the contexts of other factors, experiences and goals in their lives'. Through the acknowledgement of gender's role in participation, Sultana (2009) posits that one has to break with assumptions underpinning participatory community projects about women and men's willingness to partake projects with collective and unified identity. Instead, attention should be drawn to the gendered and spatial subjectivities in order to understand why and how people participate in these projects.

3 Context and Case

The empirical data of the thesis was collected during a two month field study in Western Kenya. Before discussing the considerations behind the methodological design, I will give a brief description of the area, and the case will be presented as a prerequisite for understanding the methodological decisions.

3.1 Context

The field work was carried out in Musembe sub-ward which is comprising the Chekalini ward together with the Koromite sub-ward, all located in the Lugari constituency, Kakamega county. During the new constitution of 2010, the division of Kenya was changed from provinces to counties. Even sub-wards as Musembe has been under changing divisional structures, and are today divided into 19 villages (Map 3.1).



Source: Author's elaboration using data from OpenStreetMap contributors and LVNWSB

The administration is comprising of a chief for the entire ward, followed by a sub-chief and village elders, one for each of the 19 villages. The recent restructuring has not completely been adopted by it's administration, which was expressed when the sub-chief and four village elders were showing the divisions of the 18 villages on a map. Consensus was not reached for a number of village boarders, which is illustrated as dotted lines in the map. Based on data I collected from the sub-chief, Musembe has a population of 19,452 with around 1,000 inhabitants in each village. Kakamega county is

well endowed with water. However, the Lugari constituency is an exception during the dry spell, as most people are depending on shallow wells and seasonal streams which dry out because of the combination of relatively high altitude and poor aquifer (Ngetich, 2013). In the Musembe sub-ward, the altitude is ranging from 1,640 m to 1,800 m (LVNWSB, 2014). The only perennial water source is the contaminated River Kipkarren which is located on the lower side. The land, now occupied by small scale farmers, was not cultivated until the late 1960s. After achieving independence in 1963, the Kenyan government initiated a settlement scheme which included Musembe (Baker, 1971). Today most settlers have sold off land. This was explained by a village elder, as being because land owners needed the money, or because they do not have enough sons to occupy the land (as an increasing number of people are moving to urban areas)[1].

Through interviews with employees at LVNWSB, I found that the institutional hierarchy for water management in Kenya is organised as having the Ministry of Environment, Water and Natural Resources on top, followed by the Water Services Regulatory Board, the Water Services Boards and finally the Water Service Providers, whereas the CBO has been granted the status as a Water Service Provider (Figure 3.1).

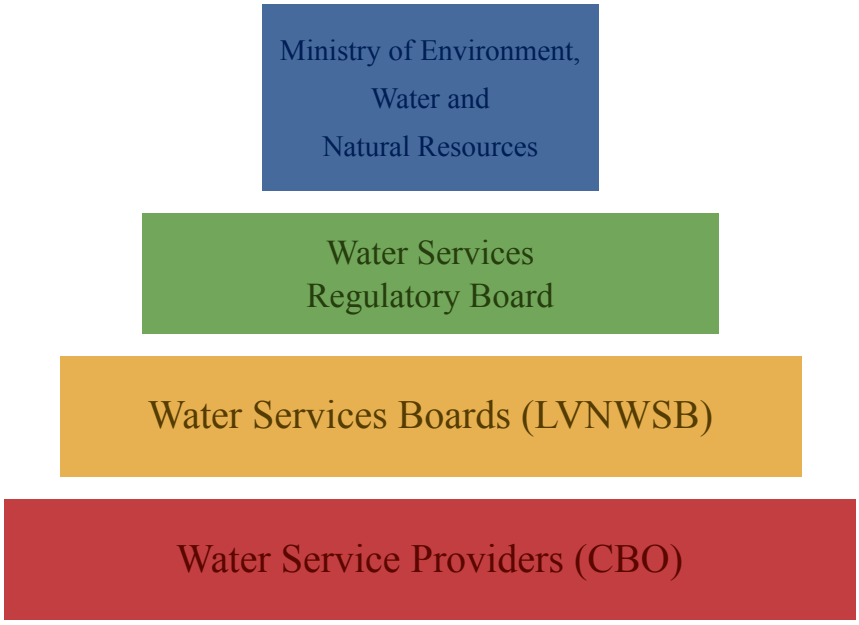


Figure 3.1 Overview of Actors in Kenyan Water Resources Management

Source: Author's elaboration based on data from LVNWSB

[1] Interview with village elder 28/01/2015

In relation to community projects in Kenya, decisions regarding government funding and provision of technical expertise is taken by the ministry. The Water Services Regulatory Board handles Water Service Provider application and decides on tariff levels that the Water Services Providers charge for water. Normally, the tariffs collected are send back to the ministry as they own the facilities, however, in the case of the MCWP, the ministry has handed over the rights of the facilities, thus the tariffs collected stays with the CBO. They cannot charge more than what has been decided by the Water Services Regulatory Board, but are allowed to charge less. Planning and implementation of projects, e.g. the distribution of water, fall under the responsibilities of the Water Services Boards, and enters into contracts with Water Service Providers who then are in charge of running the water facilities on a daily basis after the Water Services Boards have concluded the implementation. There are eight Water Services Boards in Kenya, and Musembe falls under the Lake Victoria North Water Services Board (LVNWSB)[2]. Since the present thesis is concerned with firstly, how power is vested in decision-making processes in relation to the distribution, and secondly, how these decisions will impact how people access water, the data collection has been based on interviews and observations of actors from the LVNWSB, the CBO and members in the community.

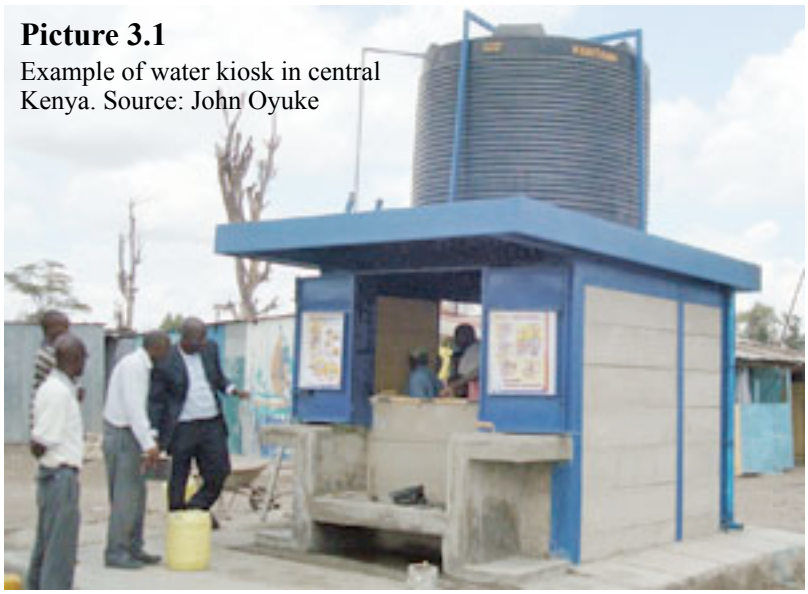
3.2 The Musembe Community Water Project

The vulnerability to water shortages was a main reason for the founding of the MCWP in 2011. From the project proposal prepared by LVNWSB (2014), the MCWP was initiated by a community based organisation (CBO) with support from a Canadian charitable organisation, Willing Hearts International Society Canada (WHISCA), that has build the Lugari Community Resource Centre in Musembe (LCRC), from where the organisation operates. The project is partly funded by overseas donors, raised by WHISCA, and partly by the Kenyan Government. In 2011 the CBO started with around ten members, whereas five are remaining in the current group, that today consists of 40 members, with a maximum of 50 members. The CBO has been working closely with

[2] Interview with LVNWSB officer 27/01/2015

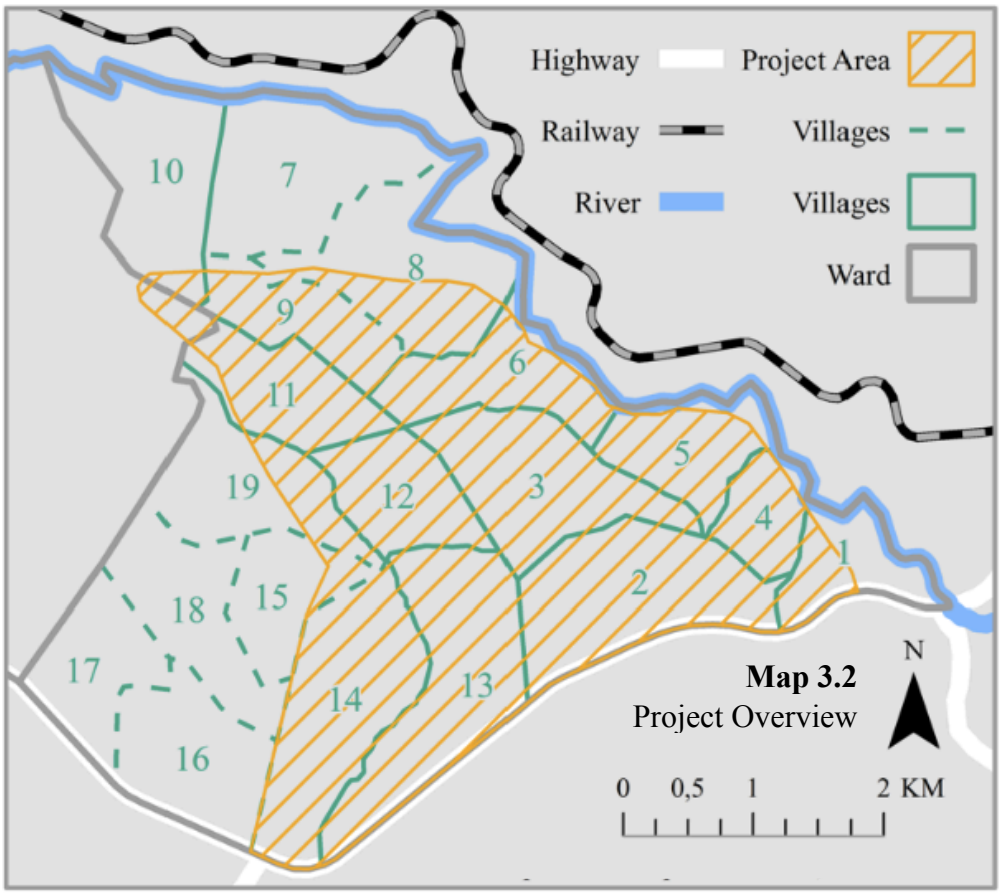
Canadian engineers (provided by Canadian donors) and engineers from LVNWSB, in the process of planning the project. In the end of 2014 the Member of Parliament representing Lugari, showed interest in the project, and has now committed to a budget for the project next fiscal term. As the Canadian engineers have predominantly been working from Canada and the members of the CBO has been changed over time, the collaboration has been rather fragmented. However, the main link between all partners have been the president of WHISCA, Khayanga Wasike, who has played a central role through out the process. Different narratives from the decision-making process will be further discussed in the analysis.

The project is currently in the final planning stage and the LVNWSB is anticipating to launch the project during the second half of 2015, after which the ground work will begin. The preliminary groundwork; i.e. surveying the roads where the pipeline will run, was contributed by Canadian donors. The final survey work was done in the end of 2014, contributed by the LVNWSB, who are also in charge of the final design and implementation of the project. When launched, the members of the community are expected to contribute with labour through digging the trenches for the main pipeline. The water flowing in the pipes will be sold at kiosks (Picture 3.1).



Picture 3.1
Example of water kiosk in central Kenya. Source: John Oyuke

Another possibility is to access water through a private connection. This would be done through a pipe that is connected to a tee which is a pipe connected to the main line from which households can connect private and smaller pipes, which will be installed with a meter controlling the consumption. The budget for the MCWP does not support the purchase and instalment of tees, pipes or meters, thus this is up to the households. After implementation, the LVNWSB will hand over the responsibilities to the CBO who will work as a Water Service Provider. The project is proposed to cover approximately 14 km2 and expected to serve 10,300 people, meaning that not all of Musembe is covered as seen in Map 3.2.



Source: Author's elaboration using data from OpenStreetMap contributors and LVNWSB

The exact procedure for such arrangement has not been decided upon, but the general idea is that the household has to pay for the expenses related to the connection. As the research question is working within the scope of the project area, the research is predominantly confined to these geographical boundaries. However, it would be

uncritical to simply regard what is included with no consideration to the excluded, and this will also be touched upon in the data analysis.

4 Methodology

4.1 Research Design

The overall research design applied to the field study was a mixed method case study, containing methods used to approach the empirical case of the MCWP based on the research question. In answering this question, I applied qualitative methods to issues regarding the process of decision making, i.e. who decides, for whose benefits in within what spatial context, and quantitative methods to assess the outcome of these decisions, i.e. the distribution of water in relation to where people live and how they are currently accessing water. After two months in the field my qualitative dataset included 20 semi-structured interviews with board members of the CBO, employers at LVNWSB and village elders; one group interview with the village elders; and participation of two CBO board meetings. The quantitative dataset is consisting of a questionnaire with 201 units and participatory mapping of houses, which will be explained further down in this section.

4.2 Qualitative Methods

An important lesson from the literature constituting the conceptual framework is that we need to understand the power structures embedded in a given network of water governance (in this case in relation to decisions of distribution), in order to grasp how these power structures will determine accessibility of water. Furthermore, when it comes to decision making we need to look beyond what people say to include how they say it, within what spatiality and what they do not say in order to get a complete picture of reasons behind how the asymmetries of power are articulated. This is especially in terms of participation, as decisions in community projects often depend on who partakes in the decision-making processes. Thus understanding the context influencing the participation may deepen our understanding of why certain actors are included and

excluded from the positions of power, rather than assuming that every member of a community is equal in terms of abilities to participate. I acknowledge that two months of fieldwork may be insufficient in completely comprehending how participation is influenced. This is why I chose to apply qualitative methods as they are generally more useful when constructing data that aims at 'looking beyond' the conventional and immediate (Valentine, 2005).

As mentioned above, my qualitative methods included two tools to construct data. The main one, semi-structured interviews[3], was chosen in order to interview different actors and to collect and compare narratives about decision making and responsibilities. As discussed in the previous section on community and participation, it is problematic to view 'communities' as homogeneous groups working as a single unit. Thus, the interviews with board members, following more or less similar interview guides, had the objective of extracting the individual stories of the motivations for engagement and perspectives of the project in terms of decision making, roles and responsibilities. Furthermore, I was invited to participate in two meetings with the CBO members and a LVNWSB official, which gave me insights in the negotiations and how members acted out their spatial subjectivity compared to their behaviour in the individual interviews. As evident in the analysis, this was done through observing how informants behaved, in terms of how they spoke, what they spoke about etc., in the setting of a private interview compared with a public meeting. Of course, it is observations made from the perspective of an 'cultural outsider', but discussed with my research assistant through many talks on cultural norms.

A major challenge to critically analyse participation in various settings, has been my own background and positionality. First of all, it would be wrong to assume that my nationality did not affect how informants interacted with me, and secondly, as spatial subjectivities are culturally bound, my own subjectivities may influence how I perceive participation of others. As I cannot assume that I had come to fully understand the culture, there may have been aspects which I have not been aware of. This challenge was to some extent minimised through numerous conversations with my research

[3] Interview guides are found in the Appendix

assistant where we discussed the local culture and my own. As the narratives from informants often differed, I found myself categorising these differences as due to 'bad memory' or 'misunderstandings' in the beginning. It took me a couple of weeks to realise that the stories were not right/wrong or true/false, but rather the individual perception of a given process. During the analysis, it is my aim to continue to value the differences, rather than looking for a single truth, and learn more about the project through critically analysing every subjectivity and what informants included and excluded. I will thus explore, not only how decisions are being made, by whom and within what context, but also use the narratives to analyse how the notion of how a *community*-based organisation has been constructed and how this construct is inclusive and exclusive in terms of participation.

4.3 Quantitative Methods

As mentioned above, the quantitative methods applied during the field work were predominantly for the construct of data used when analysing how the distribution will cover the area in terms of where people live and how they currently are accessing water. Firstly, I will present and discuss the tools used for house classifications followed by the considerations and use of the analytical survey.

4.3.1 House Classification

A central focus in my research is the distribution of water in relation to where people live, however the maps available through LVNWSB or the CBO did not include household details. Including household details has been a central concern, as the research revolves around the decision processes of distribution. Drawing on the concept of environmental governance, the underlying power structures determining decision-making should be interrogated in order to see how these decisions may impact accessibility. Thus, mapping the actual distribution will illuminate how water will be accessed by people, and this is conditioned by knowledge of where people are living. As this information was not available I decided to use alternative means to locate every house, i.e. participatory mapping which was done through the help of three informants

from different villages. All of the three informants had been living in Musembe for the majority of their lives, and had been involved in different civic affairs, and assisted the population census in 2009. Nonetheless, it should be noted that participatory mapping relies on people's memory and perception (Mikkelsen, 2005). In order to minimise this reliance the mapping was done in cooperation with my research assistant who was born and raised in the area and had accompanied me in the survey, where we walked around all of the villages. As the participants had knowledge of all settlers in the area, we began by dividing the different villages into settlers' plots, and went through each of them to determine where land had been sold off. To check the results, the number of houses where compared to the sub-chief's household count, and are found to be approximate.

In addition to the position of houses, every house was divided to one of five classes. As mentioned above, distribution of water will occur through kiosks or private connections. In her study, Beneria (1999) found that women spend substantial time fetching water and argues that huge economic potential lays in lowering the distance to a water source, as this time will be spend on other farming activities of economic value. As water will be distributed through two means in the MCWP (either through kiosks or private connections) additional economic potential is available for those who are able to arrange for private connections compared to those who do not possess the means. Furthermore, research by Kabubo-Mariaraa et al. (2006:16,20), focusing on household investments in soil and water conservation in Kenya, found that poor households are more dependant on natural resources compared to rich households, and less likely to undertake investments. Concluding from this, more affluent households (that are more capable of investments) have the opportunity of increased economic gains from the water project, compared to less affluent households. In order to have a proxy for economic status, I made a house classification based on building materials, as studies from Kenya and Tanzania (Nguluma, 2003, Krishna et al., 2004, Eriksen et al., 2005, Ifejika Speranza, 2006, Ulrich et al., 2012) have found correlation between building materials and income, in order to visualise the possible differentiated impacts of the MCWP. The distinction between local materials; clay and undressed timber, compared to 'imported' materials; bricks and dressed timber, determines the economic class and

investment abilities, as houses built with local materials do not require any substantial investments, as the clay is extracted through chopping up soil and adding water (Picture 4.1), wheres other materials required capital for purchase and transportation (Nguluma, 2003, Krishna et al., 2004, Eriksen et al., 2005, Ifejika Speranza, 2006, Ulrich et al., 2012).

Picture 4.1
House Building in Musembe
Source: The author

The classification applied in this method includes two classes for houses with local materials and three classes with imported materials, as these houses varied more in style and size compared to the houses with local materials (Table 4.1).

Table 4.1 House Classification

Class 1: 1-2 rooms, Clay walls, Grass/Iron sheet roof, Wooden windows	 
Class 2: 2-3 rooms, Clay walls, Iron sheet roof, Steel windows	
Class 3: 2-3 rooms, Brick walls, Iron sheet roof, Steel windows	
Class 4: 2-4 rooms, Brick walls, Coloured iron sheet roof, Steel windows	
Class 5: 4+ rooms, 2 Levels, Brick walls, Coloured iron sheet roof, Steel window	
Source: The author	

In the following parts, this data will be analysed through the use of geographical information system (GIS) software, ArcGIS, applied to visualise data in terms of maps. Importantly, the use of maps should not be done uncritically. The maps that will be used in this analysis will fulfil several purposes. Firstly, these illustrations can enhance the understanding of interconnections between different data. In this case, the data will reflect how the distribution of water will interplay with where people of different economic groups live (Dunn, 2005). Furthermore, it helps provide a spatial understanding of the case, as localities used in decision processes, e.g. the LCRC, can be seen in its geographical context (an aspect emphasised in the contextual framework as important in order to get a more nuanced understanding of the resource management). In order to ensure valid maps, that to a high degree replicates the physical reality of a geographical space, one needs to chose data very carefully (Dunn, 2005). The following maps are consisting of vector data gathered from OpenStreetMap, Esris and LVNWSB. OpenStreetMap is an open source database with the aim of encouraging the distribution of free geospatial data (OpenStreetMap Foundation, 2014). As the data in OpenStreetMap is collected on the basis of non-profit contributions, ranging from university institutions to amateurs, it is important to not merely accept the data as geographical truths (Gerlach, 2010). In order to ensure the accuracy of the layers from OpenStreetMap, these have been compared with basemaps provided by Esris (the company owning ArcGIS). The geospatial data of the project area and Kenya in general, which is publicly available, is very limited. For the area around Musembe, there is only data on highways, larger rivers and railways. As the water distribution will be done through pipelines laid along smaller roads as well, additional data had to be constructed to complete the picture. This has been done through digitalising pictures of more detailed maps which were provided to me by the LVNWSB. In ArcGIS, a tool called Georeferensing was used to provide the same spatial references as the data from OpenStreetMap. Through geographically comparing the different data, I have been able to manually draw the roads that were missing in the OpenStreetMap data, by using tools in ArcGIS. I acknowledge that this method is not the optimum, as the quality of the data is exclusively depending on my abilities. The lack of geospatial data of the African

continent, has been noted by several scholars as unfortunate being that there is a huge potential in the use of GIS, e.g. through crisis mapping as applied in the face of the devastating eartquacke on Haiti in 2010 (Menneke and West, 2001, Heeks, 2002, Nyapola, 2005, Ottichilo, 2005).

4.3.2 Analytical Survey

In the discussions on nature's role in projects of water resources management, it is argued that water should not be limited to the classification as source of raw material, instead, an analysis has to consider people's heterogenous relationship to water in order to deepen the analysis of how people will perceive the management of water (Sultana, 2009). To capture this relationship, I conducted a questionnaire[4] where I interviewed 201 women from the project area with concern to their source of water, distance to this source and their habits of treating water and responsibilities of fetching water in the household. I chose to limit my sampling to women as they are responsible for domestic chores, such as fetching water, in the majority of rural households in Kenya, and therefore will have more knowledge of the role water plays in their everyday life, e.g. time devoted to fetching water, compared to men and children. Furthermore, it is women who generally will be the main beneficiaries of the project, as it is they who may experience a redistribution of their time available for domestic work if water will become accessible in more convenient ways (Silberschmidt, 1992, Westmann et al., 2005, Ndiritu et al., 2014). I was unable to collect a probability sample, as the administration only had a population headcount, but lacked data about sex, age, etc. Instead, I applied a combination of a quota and convenience sampling technique, using geographical and economic quotas, i.e. I interviewed at least 20 women per village and informants were divided into six categories depending on the occupational status of themselves and their husbands[5]. The questionnaire also inquired whether informants had knowledge of the project along with the source, and at what distance they would

[4] The questionnaire is to be found in the Appendix

[5] Divided into six categories; 1: Wife-Farmer + Husband-Farmer; 2: Wife-Farmer + Husband-Worker; 3: Wife-Worker + Husband- Farmer; 4: Wife-Worker + Husband-Worker; 5: Wife:Worker + No Husband; 6: Wife:Farmer + No Husband. Furthermore, work is divided into casual labour and permanent work

consider going to a kiosk instead of using their current water source. I was conducting the interviews during the day, and as I was interrupting the daily chores, I wanted to keep the questions short and unambiguous.

In retrospect I find that my questionnaire has a number of weaknesses that should be recognised before analysing the results. First of all, one can discuss the validity of representation in relation to a non-probability sampling, as it is depending on the availability and willingness of women combined with my judgement of obtaining a valid representation of women in the area. The conceptual framework includes discussion on the conceptualisation of groups, arguing that women or men should not be generalised as unified groups, as differences in background and class makes it difficult to assume that every type of women can represent each other (Overton and van Diermen, 2003, Parfitt, 2005). Another challenge I encountered was in the question regarding occupation, as my definition of farmers and workers were overlapping, as I found that some farmers only use farm produce for personal use whereas others sell the produce. Consequently, it was left to the informant's self identification to decide whether she identified herself as a farmer or worker. The typology was constructed based on 30 pilot interviews, where I used the classes that I encountered during the interviews. Alternatively I could have asked about monthly income, however I decided not to do so as this would require an assumption that income is a steady flow, that people keep records, and that women would know of their husbands' income. This of course could be the case, but it was an assumption I did not want to make, as I was under strict time limitations, thus testing my questionnaire several times was not an option.

The results from the analytical survey became an extensive portion of data which I intend to use in several ways. First of all it will be used in relation to the narratives from the CBO members about the community. They claim that the community should provide physical labour in terms of digging trenches, and has thereby attached a role to members of the community. However, this will be compared with stories told from women in the community; about what they know about the project, from what sources and their willingness to play an active part in the project.

Furthermore, the data constructed will be used in relation to the data constructed for the mapping of distribution of water. In here, the data from the questionnaire concerning women's relation to water will be visualised to analyse how the water kiosks will cover the area in relation to how people are currently accessing water. Furthermore, the survey also included attitude questions on whether women would use kiosks as a source of water, and limits to the distance of these kiosks if they were to use them.

5 Decision-Making Processes and the Consequences for Water Distribution

In order to understand how decisions are negotiated in the MCWP, I will present and discuss data that can help critically analyse how notions of community, participation and spatiality have shaped how the decision-making processes regarding distribution of water have rolled out. I will start by engaging in a narrative analysis of what role the notion of community and participation, is playing in the project. This will be followed by analysing processes of decision-making in relation to the distribution of water, whereafter the consequences of these decisions will be analysed with the help of map illustrations. All of this is to help the analysis to grasp how the power vested in decision-making influences how people access water in the MCWP.

5.1 Building a Community Project and the Limits to Participation

When we refer to the names of organisations or communities, instead of the individuals involved, it helps us to categorise different actors in a more simplistic way. With respect to the concepts of community and gender, I will try to refrain from applying such simplifications in the following analysis, as we may end up perceiving these organisations as one intact unity and forget the heterogeneity and power asymmetries that may determine decision-making processes. In this regard I will introduce a central person in the MCWP, the president of WHISCA, Khayanga Wasike, who was born and raised in Musembe before she moved to Canada and returned to found the LCRC in 2009. Even before the MCWP was initiated, Khayanga Wasike got funds from the Kenyan Ministry of Environment, Water and Natural Resources to

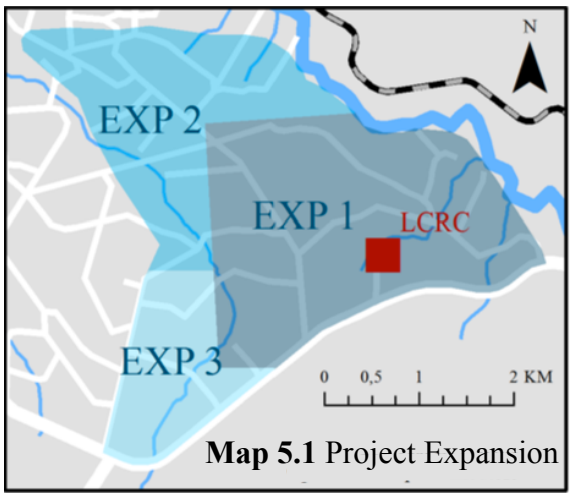
construct a borehole covering the needs of the LCRC and the people living in proximity of the centre. According to Khayanga Wasike, the aquifer was smaller than expected and water was barely enough for the centre, so she returned to the ministry's office in Nairobi to push for another solution that would provide a bigger portion of Musembe with clean water. The agreement was to take water from another project in the Lugari constituency which is funded by the World Bank. After investigating supply and demand, the water officer in Lugari found the demand of Musembe too high to be included, which resulted in an alternative of rehabilitating an old and unused pump to serve Musembe, a project that was eventually named the MCWP. This alternative doubled the initial budget, and Khayanga Wasike had to drive around North America for one moth and fundraise money. Throughout the project, Khayanga Wasike has been driving back and forth from Musembe to Nairobi for negotiations with the government, and has even jumped on a plane from Canada due to a sudden opportunity to see the minister[6]. Clearly, coming from a rural area in Kenya, it is not usual to have the means to go through such lengths. Again, this shows how general conceptualisations of community is blind to recognise the underlying currents determining the speed and directions of a given project.

An interview with the water officer who made the preliminary report about the project (LVNWSB, 2014) tells the story slightly differently, as he recalls that it was 'the village elders and opinion leaders' that went to his office to demand that Musembe should be included in the World Bank project, and Khayanga Wasike was brought in afterwards to assist the people[7]. The two narratives show how the same process can be perceived very differently. Nonetheless, through illustrating the expansion of the project (Map 5.1), one can see how the project grew from the spot of the LCRC to a longer part of Musembe. Arguably, the community centre, and especially Khayanga Wasike, have been detrimental in defining the geographical scope of the project, as the project area has grown out from this position. The name of the centre states that it is a community centre. As it is not initiated by the community per se but an external actor, WHISCA,

[6] Interview with Khayanga Wasike 18/03/2015

[7] Interview with Water officer 02/02/2015

one cannot assume that members of the community have a particular sense of belonging to the centre, which raises the question whether the centre is the most appropriate point of departure in the MCWP, with respect to the idea of the MCWP being community-driven. Alternatively, the administrative office or commercial areas could have been representing a setting in which more members could identify with. According to the water officer, the decision to expand the project was taken within the governmental body, as his report showed how Musembe is home for people below the poverty line, who especially are in need of clean water[8].



Map 5.1 Project Expansion

Source: Authors elaboration using data from OpenStreetMap contributors and LVNWSB

5.1.1 Ownership

Even though Khayanga Wasike's narrative takes on the position that the project was a community project all along[9], the water officer told a different and more linear story, where the decision to rehabilitate the old facilities was the shift to a *community* project. 'The government would give the facilities to the community to own it fully'[10]. As discussed in the conceptual framework, the creation of ownership is common in community projects, based on the conviction that ownership is fundamental for the success of community projects. The MCWP is no exception, however, the understanding of ownership varies depending on what actors one ask. According the the water officer, the ownership entails that the CBO can set tariffs charged for water, as long as they do not exceed the national tariffs. Furthermore, in with the ownership of the facilities comes more power over decision-making, including deciding where kiosks for distributing water will be located, as discussed in more detail further down in the

[8] Ibid

[9] Interview with Khayanga Wasike 18/03/2015

[10] Interview with Water officer 02/02/2015

analysis. For Khayanga Wasike, ownership also entails collecting tariffs, however it also demonstrates a break with the government, in which she has little confidence in managing the distribution of water. She stated this during a visit to another water project operated by the LVNWSB. One of the tanks was leaking, and she stated that this would never happen in the MCWP as they handle the tariffs themselves, compared to the given project where the LVNWSB was sending the tariffs to the government and had to apply to receive money for repair, which, due to bureaucracy took an exceptionally long time[11]. Even though this responsibility will be one of the CBO, an engineer from the LVNWSB, pointed to the fact that the CBO will need help from them if such technical issues occur, not to mention guidance on how to manage a water project[12]. As explored in the environmental governance scholarship, boundaries between responsibilities becomes increasingly obscured as more actors enter collaboration of water resources management (Himley, 2008). The narratives illustrates how this is evident in the MCWP, as different actors have different (and at times opposing) accounts, and thereby risk of creating an uncertainty of who is the responsible if problem occurs.

5.1.2 The CBO Behind the MCWP

As ownership is given to the CBO, the organisation plays a major role in the MCWP, thus, understanding the composition of this organisation is important to understand how decisions are negotiated, by whom and within what context. The CBO was established in 2011. According to Khayanga Wasike, she contacted the chief of Chekalini, a former schoolmate of hers, and asked him to suggest people who would be suitable as members, i.e. a criteria that was primarily based on level of education. In an interview, the chief acknowledges Khayanga Wasike as the initiator of the project and recalls that ‘we held a meeting at LCRC and called quite a number of people to come there. So we had kind of an election taking place. The people that attended that day decided on who should be the chairman etc. It was not a one man’s game. It is a

[11] Interview with Khayanga Wasike and water officer 27/01/2015

[12] Interview with LVNWSB engineer 02/02/2015

community supported idea.'[13] According to the chief, the nature of the project is that it is community driven, though how the CBO members were initially chosen was constricted by the people who were invited. The initial group consisted of seven people, besides Khayanga Wasike, whereas two remains in the current group. The chairman, which is one of the two original members, explains the fallout by the fact that a member fee on 2000 Kenyan Shilling (KSH) was installed in August 2013 when the CBO had around 10 members. This fee increased to 5000 KSH later in 2013[14]. This fee had two purposes, firstly, to cover administrative costs and secondly, to assure the donors of local commitment to the project[15].

Today the CBO has 40 members and from August to September in 2014, 13 new members were registered, meaning the total amount more than doubled[16]. This increase was due to a wish for recruiting more members, and was accomplished by members through their existing networks[17]. In relation to the conceptual discussion on community and participation, it is clear that certain entry barriers have been put in place which restricts partaking in the CBO, thus membership depends on your means and who you know. These entry barriers were also touched upon by the chairman, when explaining the processes of obtaining new members. 'We don't just take anybody. Some people are trouble makers. They come in and then they start giving a lot of headache. Some people come in for the sake of starting some problems. Members have to agree to accept new members. Some just want to misappropriate the project to take financial advantage. If you do not have a willing heart, you cannot do it'[18]. The chairman emphasises that the project is driven by the people in the community, however, the representation of the community is limited to what people CBO members view as 'willing' and 'trouble

[13] Interview with the chief of Chekalini 04/02/2015

[14] Minutes from CBO meeting 13/08/2013 and 02/10/2013

[15] Interview with the chairman 03/02/2015 and with another CBO member 29/01/2015

[16] Minutes from meetings

[17] CBO member 18/02/2015

[18] Interview with the chairman 03/02/2015

makers', and the inclusion and exclusion may be a reinforcement of the persisting power structures, as these decisions are made by people already in power.

5.1.3 Participation of the Community

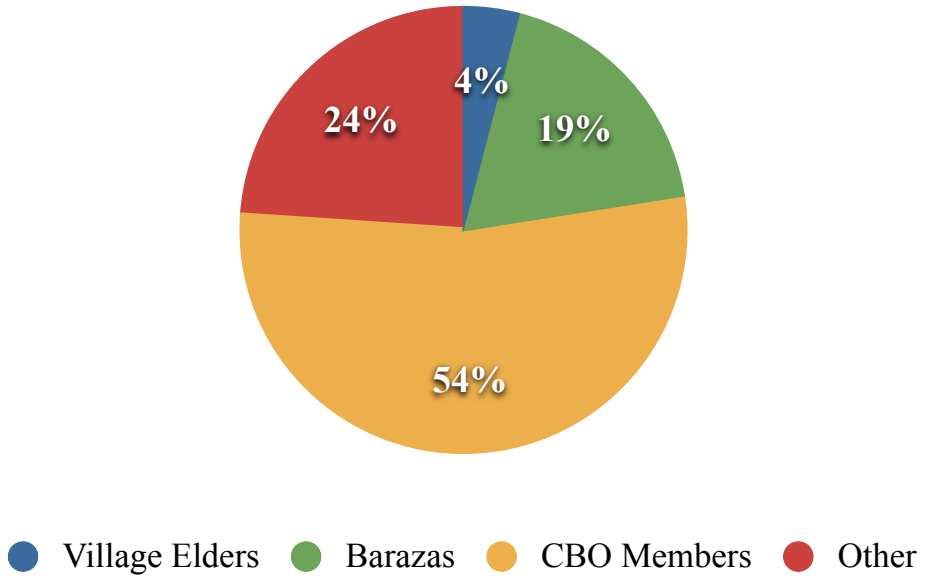
In the minutes from CBO meetings, the engagement of women and youth is mentioned as an important factor for the creation of a sense of ownership over the project in the community. This should be ensured through a gender quota of 30 percent women (currently 22.5 percent) and the making both women and youth groups. These initiatives fall within the critique put forward in the conceptual framework, as the conceptualisation of women and youths in this case, is blindly accepting women as a unified group. In the case of the female CBO members, the majority has been well educated and has at some point of their lives worked in a high-end job compared to the majority of women living in Musembe, who predominantly work as farmers. This is not to say that the women in the CBO do not have empathy or understand all types women in Musembe, per se, however, assuming that all women are equal is what should be scrutinised.

Throughout the interviews and meetings, CBO members persisted in emphasising that this project was a community project, that the community *owned* the project, and this sense of ownership should be established through participation in terms of digging trenches for the pipeline. According to members, this participation through manual labour had two purposes. Firstly, it was a criteria put forward from the Canadian donors to ensure that it was indeed a community-driven project, i.e. that all members of the community would partake in the project, and secondly, it was grounded in the idea that if a person has laboured for a project, the incentive for protecting it against theft and vandalism will increase[19]. In the MCWP, the notion of ownership is reduced to the contribution of physical labour, an act which is demanded from one actor, and non-negotiable. In relation to the involvement of community members, CBO members argued that village elders should play a central role in dispersing information about the

[19] Interview with CBO member 03/02/2015

project and encouraging people to volunteer once the project was launched[20]. Furthermore, the CBO members explained how they participated in barazas (public meetings hold in villages) to sensitise the people [21]. Even though 76 percent of the units in the questionnaire had heard about the MCWP, the source of this information did not mirror the CBO members' intentions, i.e. the use of Village Elders as the link between the CBO and community members, as seen in Chart 5.1.

Chart 5.1 Knowlede of the MCWP



Source: Author's elaboration using data from question 8

The variable called 'CBO members' covers replies where people had heard about the project from a CBO member, not at a baraza, but typically at their local church, at a funeral[22], or at the LCRC, i.e. venues that is part of CBO members' networks. When I attended meetings with the CBO members, one member encouraged the rest to spread information at churches and funerals, but so far only a couple of members took advantage of these opportunities. Consequently, the information that eventually shall ensure the sense of ownership depends on whether people are attending

[20] Interview with CBO members 03/02/2015 and 05/02/2015

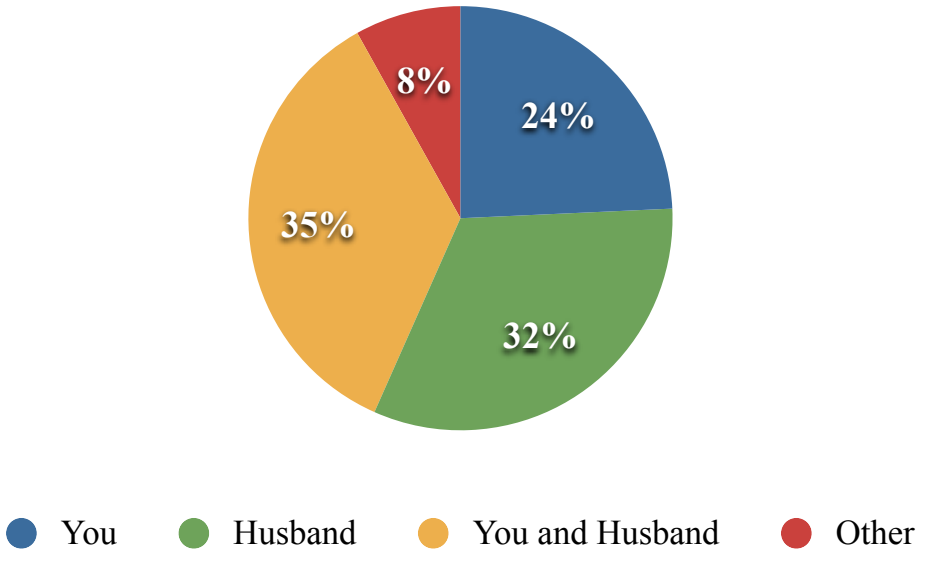
[21] Interview with CBO members 05/02/2015 and 09/02/2015

[22] Funerals are a major public gathering and politicians use them for campaigning

the same events as the CBO members who are actually spreading information about the project. As this is 'individual' initiatives, compared to unified ones as when members partake barazas, the information will be based on what the CBO member knows of the project her or himself (as discussed later, the knowledge is not necessarily streamlined). Despite this fact, the women who participated in the survey were generally positive towards the idea of volunteering, even 88 percent answered that they or a family member would like to volunteer if asked.

As the questionnaire is only including women, one cannot assume that the male householders have received information through similar channels, especially since women are predominantly in charge of domestic work and thus tied up for many hours every day. Therefore it could be that men are more frequently attending barazas or in touch with village elders (of whom the majority is men). However, assuming that women do not take part in domestic decision-making, and thus play an important role in deciding whether a household should pay for water, would be critical. This is illustrated in Chart 5.2, showing that from the informants who would consider to pay for a private connection, it is clear that women see themselves as playing a main role, as 24 percent stated that they would pay for the connection themselves and 35 percent stated that they would share the cost with their husbands.

Chart 5.2 Payment of Private Connections

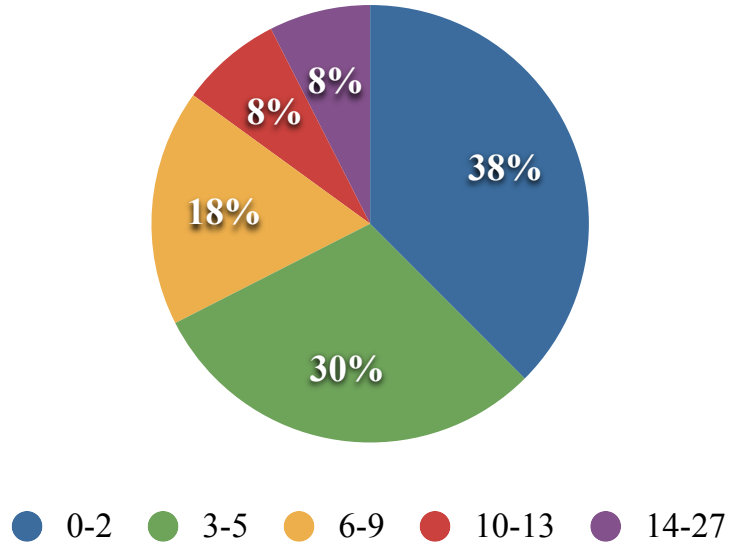


Source: Author's elaboration using data from question 12

5.2 Decision Processes Underlying the Distribution

As Himley (2008:446) notes, the concept of environmental governance should be applied with the purpose to 'gain a fuller and more nuanced understanding of how actual resource/environment decisions are being made, by whom, for whose benefits, and within the contexts of what power asymmetries'. Aiming towards such an understanding of the MCWP, I will critically analyse decision-making processes regarding distribution. During the fieldwork I found that these decisions were predominantly taken during meetings hosted by the CBO, who invited engineers from LVNWSB. As most decisions are taken here, participating in these meetings, is therefore of central importance for influencing decisions regarding e.g. distribution. Going through attendance lists from 27 meetings in the period from July 2011 to March 2015 revealed a rather varied picture of attendance. Chart 5.3 shows the spread in number of meetings that members attended in percentage. As illustrated in the chart, only 16 percent or 6 members have been attending the majority of the meetings and thereby making the decisions.

Chart 5.3 Number of Meetings Attended



Source: Author's elaboration using data from minutes from MCWP meetings

Being present at a meeting, however, does not entail that one actually influences the decisions. According to the notion of spatialised subjectivities, the space in which a

meeting takes place, can also impact how people participate. As I interviewed a number of the CBO members and observed meetings where the same informants were participating, I was able to compare their behaviour in the two environments. A female informant, who during the interview was, in my perspective, vivid and outspoken, took on a different role when participating in a meeting, where she spoke with a low voice and lowered gaze [23].

5.2.1 Location of Water Kiosks and Pipeline

Decisions taking place during these meetings, include the location of water kiosks. Obviously, the kiosks are essential for how people will eventually access water, thus, much power is situated in the decision processes of choosing these locations. Again, several narratives were told of how these decisions evolved, providing a kaleidoscopic story of the process. One member said that the kiosks were chosen by the CBO members, with guidance of LVNWSB officers; whereas another member explained how the community proposed 42 kiosks and the board then chose seven of these based on people's distance to water; a third said that kiosks where chosen by members based on population; while a fourth mentioned that the locations where chosen based on the distance to one another to ensure good coverage. Two of the seven village elders I talked with recalled that it was the village elders who chose the locations, whereas two others told me that it was the CBO members who chose, and one said that it was based on a discussion and another was not involved at all. A LVNWSB officer explained that they have designed the kiosks but did not have anything to do with the selection and was not aware of the criteria behind[24].

In the minutes from the meetings, it is written (by the secretary) that the village elders were called to a meeting where they proposed 42 kiosks, and in the following meeting, the members of the CBO chose seven of these, based on locations that are facing roads, and strategical spots for other business purposes as well (Map 5.2); two of

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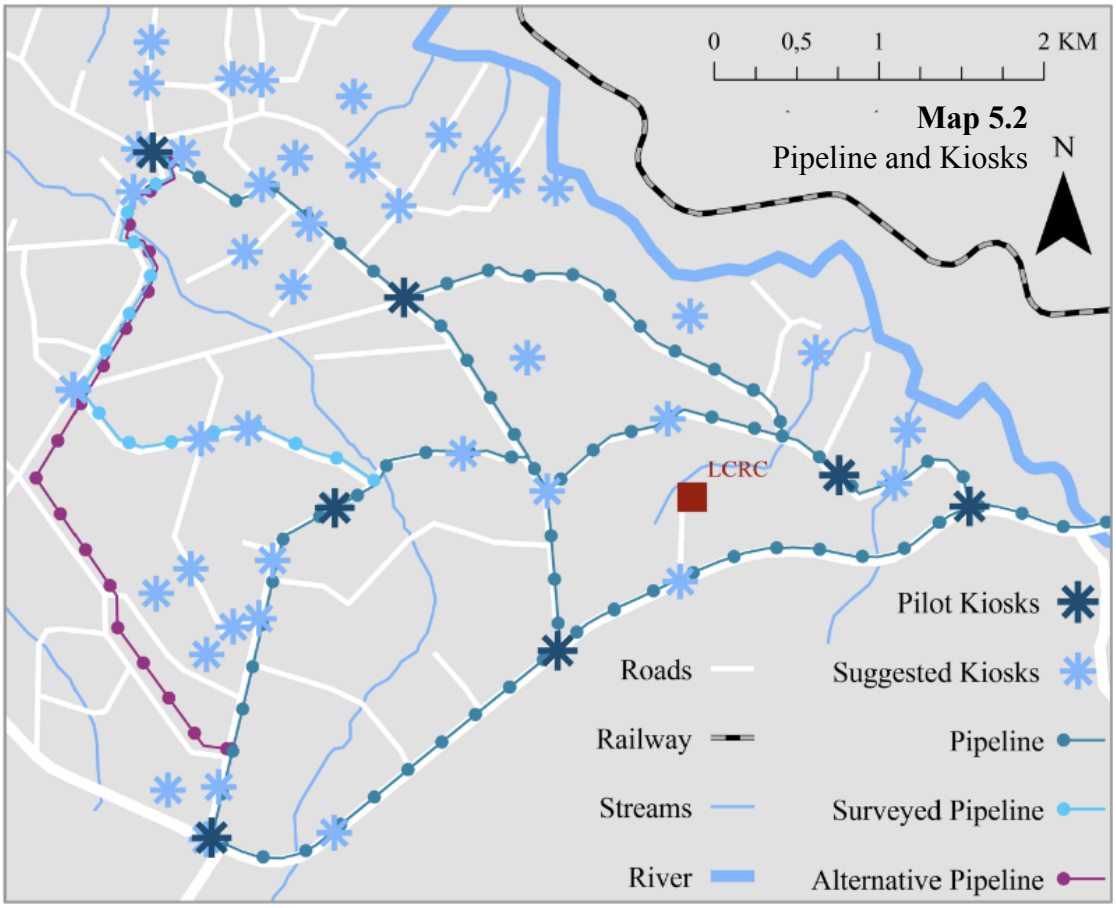
[23] Interview with CBO member 04/02/2015 and notes from meeting 18/02/2015

[24] Interview with CBO members 29/01/2015, 30/01/2015, 02/02/2015, 05/02/2015, 20/01/2015, 02/02/2015.

the pilot kiosks are placed by schools whereas the other five kiosks are placed in locations where there are concentrations of shops. In the future, people can apply to the CBO to open a kiosk, which can also be used for other commercial purposes, providing incentives for choosing locations based on economic possibilities, not necessarily ensuring that people will have equal access to water[25].

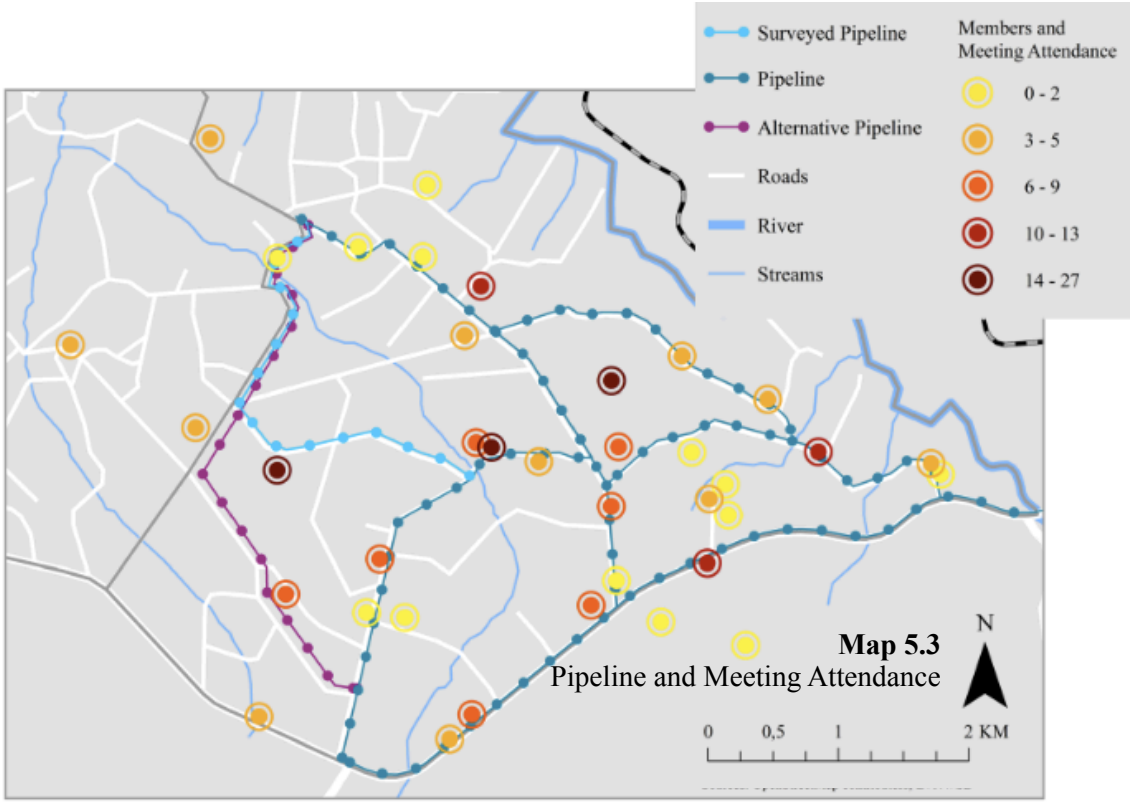


Source: Author's elaboration using data from OpenStreetMap contributors, LVNWSB and minutes from MCWP meetings

Map 5.2 is also illustrating how the pipeline will cover the area. Even though the project has not been launched yet, negotiations of expansion has already begun. The project was granted survey work, by the LVNWSB, which were in the area to survey another water project. As this is very costly, the surveyors covered areas outside the project area to use for future expansion. During my field work, I was driving along the surveyed area with two engineers from LVNWSB and a CBO member. It was noted

[25] Interview with CBO member 03/02/2015

how the surveyed line only will be able to serve households through private lines located north-eastern to the pipe due to the elevation. The CBO member mentioned an alternative pipeline, which would serve substantial more households as this road is going along the top of the slope. In nn interview with the member, he explained how the surveyed line was chosen at a board meeting, and noted how this line would run in the proximity of a member who has been involved with the project for a long time (Map 5.3)[26].



Source: Author's elaboration using data from OpenStreetMap contributors, LVNWSB and minutes from MCWP meetings

At a CBO meeting in March, the coverage issue of this area (Milimani) was mentioned, and became subject for a larger discussion among the members, led by a member who is living in Milimani. The LVNWSB officer attending the meeting, finalised the discussion by ensuring that an additional line would go through the area, along with another line going along the highway, where the member lives. In an interview with the officer after the meeting, he mentioned the fragmentations among the

[26] Interview with CBO member 02/02/2015, 17/03/2015

members, i.e. even though the members had chosen the line, members expressed frustration about these decisions. Furthermore, he pointed to the impatience in receiving private connections, as he assured me that distributing water through kiosks was the main objective of the project and that private connections would only be of additional concern. Contradiction to this was found in the meetings and interviews, where members expressed a general want for a private connection straight away and talked about the connection as a purely individual arrangement. However, the officer stated that no private connections should be made directly to the main pipeline, instead, bigger pipes should be connected as extensions, to benefit several people simultaneously [27].

As discussed in the conceptual framework, the relationship between people and nature, or water, will find ways to influence how the success of a project is perceived. In the case of the CBO members, there are clear expectations of receiving water privately, thus this is a criteria for satisfaction with the project. On the contrary, the LVNWSB officer is expressing main concern with ensuring a more broad coverage through distributing water through kiosks. As Bakker (2003) discussed in her research, the biophysical properties of water disrupt people's expectations to water management. To get water running in private lines requires a level of investment in materials due to the uncooperativeness of water. The CBO members perceive these investments as an individual act; as they talk about connections as a single line from the main pipe to their homes. The water engineer pointed to this 'lack of knowledge' in the interview, as he stated that 'they still have a lot to learn'. The engineer has substantial knowledge of how water's biophysical characteristics determine the distribution, however, as the CBO members do not share this knowledge, they think of the possibilities for distribution in different terms. Another example of knowledge gaps was expressed at the meeting, when it was revealed that some members were not aware of the fact that the water distributed was only to be used for drinking, cooking and livestock, and not irrigation, as the intake is not sufficient but also chlorine causes damage to plants.

[27] Interview with LVNWSB Officer 18/03/2015

5.3 Distribution's Spatial Consequences

With regards to water's agency, we need to understand the role water plays in the everyday live of women living in the area in order to analyse how the distribution may impact them. Central to this analysis is the analytical survey which objective has been to grasp how women interact with water on a daily basis. The labour of fetching water is a key in understanding this, and the findings shows that in 51 percent of the cases, it is the woman who is in charge of fetching water, and in 21 percent, the labour was shared between the woman and her children. In the remaining cases, women answered that it was either the children, house help or a shared responsibility between all household members. In relation to previous studies on domestic work as presented above, the distribution of labour in Musembe is rather typical. When they go to fetch water, it is predominantly at streams, and it can take as long as 4o minutes to reach these streams from home, walking with 10-20 litres of water on their heads[28] (Picture 5.1).

Picture 5.1
Women Fetching Water
Source: The author

[28] Analytical survey question 6

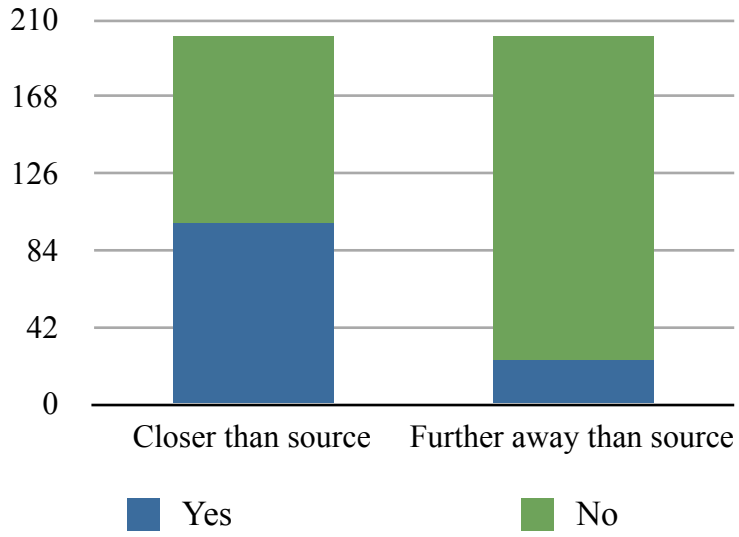
However, this is not common, as women living in the project area spend 13 minutes on average to reach the stream. A Kenyan study showed that households walked 4-6 times every day to fetch water, so in the context of Musembe, women and their family members walk 104-156 minutes every day, on average to fetch water (Uwazi, 2010). Some women in the survey told me how the hardships of carrying water in buckets on top of their heads every day for years has caused daily back aches. When conducting the interviews, women often invited me into their home. Many houses had a 'LifeStraw' hanging on the wall, a tube used for chlorine dispensing in water treatment, or a calendar from WaterGuard, the main brand of diluted chlorine for domestic water purification in Kenya. In 2014 Musembe has been part of a nation wide initiative for promoting water purification in rural areas, where the LifeStraws and calendars where distributed to households. Even 77 percent stated that they use diluted chlorine for water purification. This result is a contrast to another study on water purification in rural western Kenya that found only 5-10 percent used diluted chlorine, and one quarter boiled the water for purification (Kremer et al., 2009). The substantial discrepancy, may be explained by the resent promotion of WaterGuard. Furthermore, there has been installed dispensers with diluted chlorine by streams at the main points where people fetch water, which many women also referred to as their source of chlorine. The question in the survey did not specify if chlorine was used every time, or only occasionally, which is the case in the study by Kremer et al. (2009). Nonetheless, the fact that women either regularly or occasionally use diluted chlorine for water purification, signals a degree of awareness of clean versus dirty water.

5.3.1 The Coverage of Water Kiosks

As kiosks will be the immediate points of water distribution in the MCWP, an assumption that people want to go and buy water is underpinning this factor. Khayanga Wasike expects that this will be the case for several reasons. Firstly, people will avoid water borne diseases by buying treated water, and secondly, the kiosks will have a steady flow of water without being vulnerable to environmental factors as other streams

and boreholes which occasionally dry out[29]. However, this assumption is to some extent contradicted by the CBO members themselves, as they expect to arrange for a private connection to their homes. In order to get a response from people who will be the 'beneficiaries' of the project, I asked women if they would go to a kiosk and pay for treated water. In my pilot questionnaires, I found that women mentioned distance as an important factor determining the choice, thus in the final questionnaire the question was supplemented by a variable of distance; i.e. if they would go to a kiosks and pay for treated water that was closer to their current source, and a kiosks that was further away than the current source of water (Chart 5.4).

Chart 5.4 Willingness to use kiosks

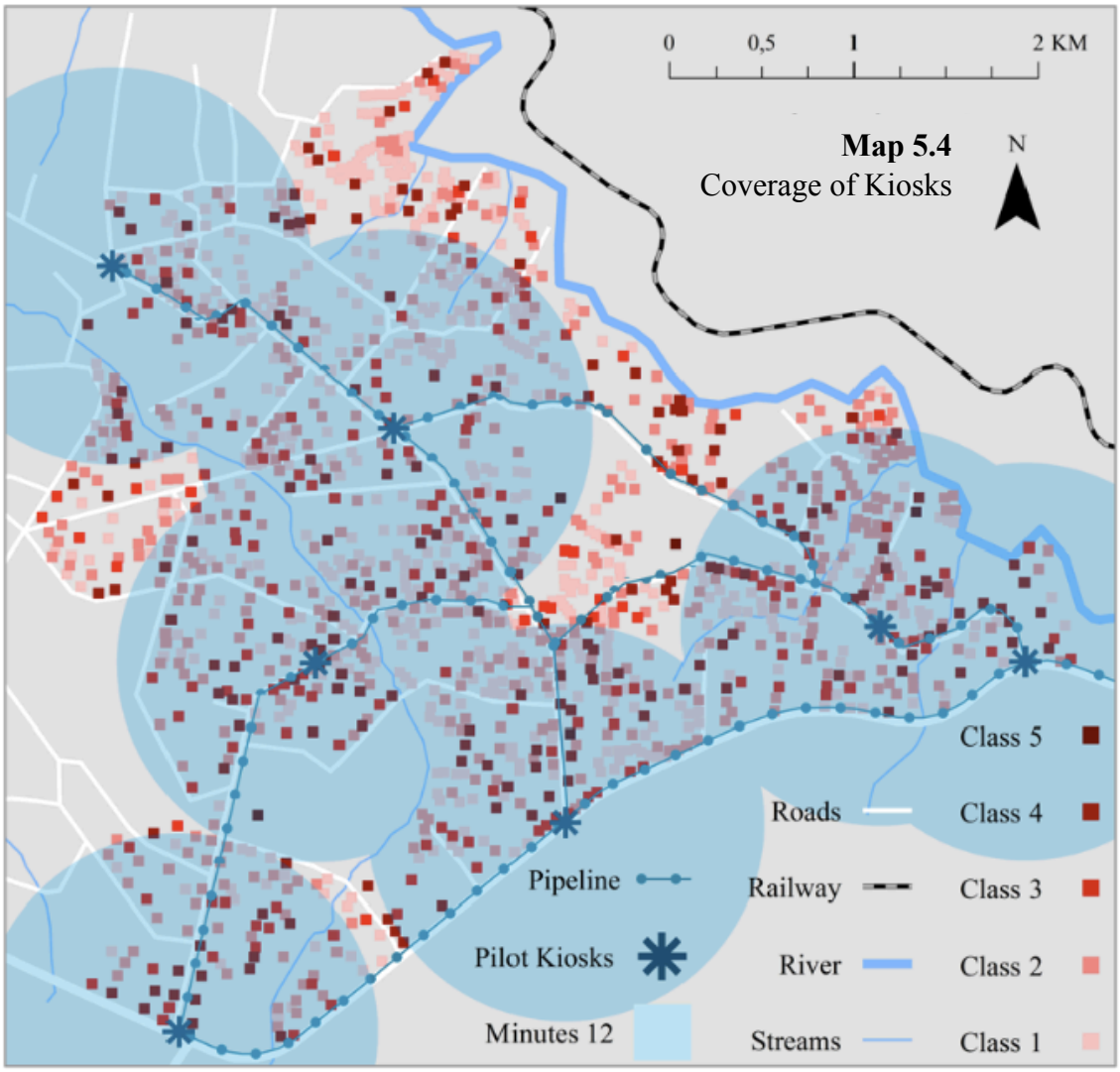


Source: Author's elaboration using data from question 10

Clearly, distance plays a major role in whether women would choose to go to a kiosks instead of their current water source. In the survey, 99 women or 49 percent answered that they would go to a kiosk if this was closer than their current source, whereas only 12 percent or 24 women would go to a kiosks even if this was further away than their current source. Based on this finding, it is crucial that the kiosks can be reached within a certain distance before women living within the project area would consider using them. As we know that women in the project area walk 13 minutes on

[29] Interview with Khayanga Wasike 27/01/2015

average, the kiosks should at least be reached from the households in a matter of 13 minutes, to ensure that women would benefit of the project. The coverage of the pilot kiosks in relation to this finding is illustrated in Map 5.4.



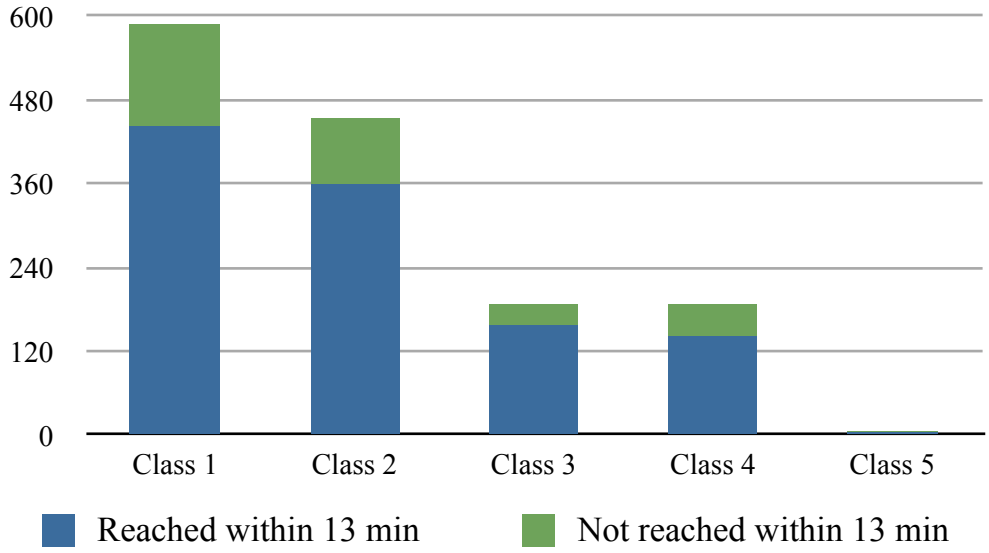
Source: Author's elaboration using data from OpenStreetMap contributors, LVNWSB, minutes from MCWP meetings and data collected through participatory mapping

As seen in the map, the coverage is incomplete if every household should be able to reach a kiosk in 13 minutes. This finding can be seen in the light of Sultana's (2009:355) study on how arsenic levels in water was playing an active role in determining how different people perceived the success and failures of community projects in Bangladesh:

As a result, what emerges is that water and arsenic consolidate and disrupt community and participation, whereby power relations and social realities are re / configured through hydro-social assemblages. While arsenic as a deviant 'actant' or an 'uncooperative' resource can be appropriated by some to their benefit (e.g. co-opting a water project) and cause immense suffering to others (e.g. those left out of projects), what emerges is that the heterogeneity of nature vis-a`-vis arsenic and polluted waters comes to influence everyday social realities in nuanced ways, where daily, complex and geographically embedded struggles are lived and experienced differently in the context of development.

In the same way, the distance to the kiosks from various households can act as a source that either benefits the given household or create distress for others, as they are 'left out' of the project. Looking into what types of houses are left out, the houses identified in the house classification illustrates that the coverage has a relative even spread over the five classes (Chart 5.5).

Chart 5.5 Kiosk coverage



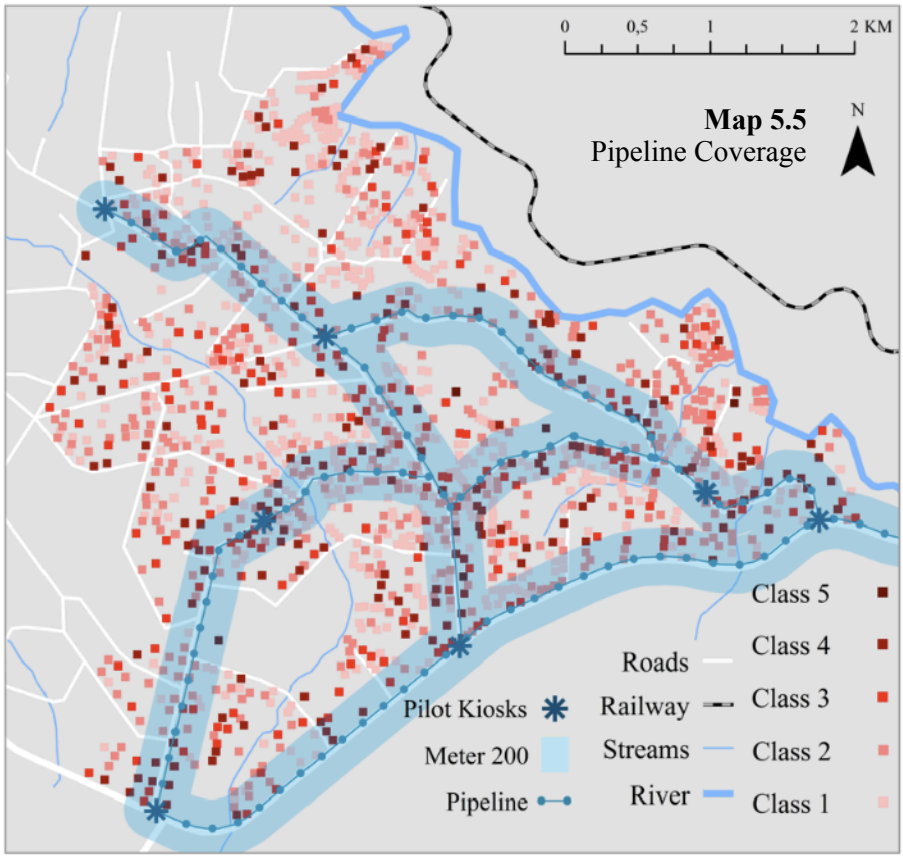
Source: Author's elaboration using data from minutes from MCWP meetings and data collected through participatory mapping

In class one 443 out of 589 households or 72 percent can reach a kiosk with 13 minutes; in class two this is the case for 360 out of 454 households corresponding to 79 percent; in class three 84 percent or 157 out of 187 households are covered; wheres it is the case for 76 percent in class four corresponding to 142 out of 187 households; finally,

class five is only constituting of five households, and theres only one household that is outside the coverage area. The map also gives a picture of how the area is covered with different types of houses. Clearly, class one and two are the dominant classes in Musembe as they constitute of 73 percent of all houses in the project area, which fits well into the fact that it is predominantly farmers living in the area.

5.3.2 Private Connections and the Density of Various House Classes

As discussed above, the project is planning to offer another alternative for water distribution; i.e. private connections to households. The possibilities for such arrangements, however, are indeed more limited, as a household is required to be placed in the proximity of the main pipeline. In an interview with the LVNWSB engineer who is head of the planning and implementation of the project, he was not able to state an exact distance for such connections, however, he estimated that around 200 meters were the average distance that connections could be drawn (Map 5.5).



Source: Author's elaboration using data from OpenStreetMap contributors, LVNWSB, minutes from MCWP meetings and data collected through participatory mapping

As illustrated in Map 5.5 this possibility is only an option for a small portion of households. The engineer stated that areas outside this reach would require an extension of the main line, and such investments are for the CBO to decide whether they will make[30]. According to Khayanga Wasike, the Canadian donors are very strict in relation to the money they have donated, and do not allow any changes in the budget, i.e. such extensions will not be planned for as it is now[31]. As mentioned earlier, the Member of Parliament has committed to support the project financially, which his secretary, who has become a member of the CBO, explained in an interview. This money however, is intended to further extensions into Koromite sub-ward; 'The Member of Parliament is preying that this project also will cover the other sub-location. That is his desire.'[32] The money has been ear-marked for the surveyed line illustrated in Map 5.3, and the project will thus spread the width rather than the depth of the distribution. The desire for coverage of both sub-wards, however, is not necessarily going to be a reality, and once again, we find water as an 'un-cooperative' agent shaping and impinging on how water resources can be managed (Bakker, 2003). As a LVNWSB engineer explains, there is water for Musembe and parts of Koromite, but the entire area is beyond the water capacity available[33].

As the CBO is planning their current budgets, the extensions for private connections to the individual households are left to the individuals. Since investments are to a higher degree found in homes that are economically better off (Kabubo-Mariaraa et al., 2006:16,20), these homes will be more likely to gather funds for extending the main pipeline in order to receive water on their compound. The process of receiving water privately can be compared to electricity. Receiving electricity can also be considered as a domestic investment following a similar process of application, as people apply to Kenyan Power to get an extension to their home, which they have to

[30] Interview with LVNWSB Officer 18/03/2015

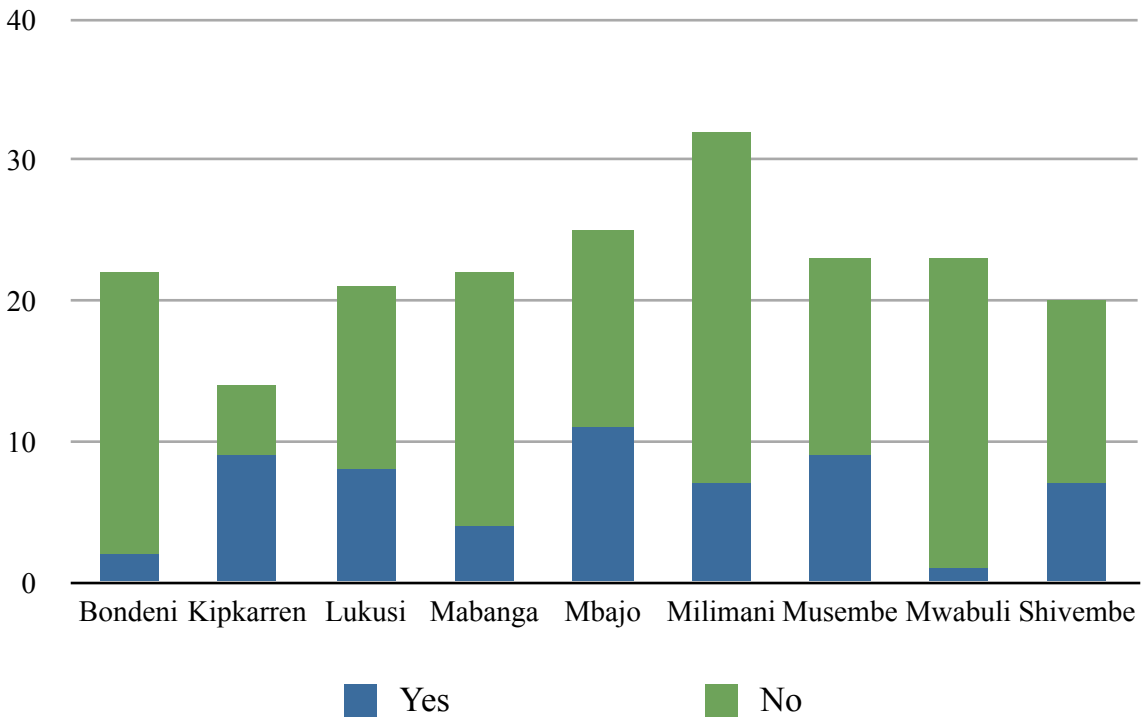
[31] Interview with Khayanga Wasike 27/01/2015

[32] Interview with Member of Parliament's Secretary 03/02/2015

[33] Interview with LVNWSB Engineer 02/02/2015

pay for themselves. However, it is required that there is a transformer in the proximity of the house, for which Kenyan Power charges a fee for installing. These transformers are far from covering all of Musembe, and only 28 percent of the women in the survey had electricity in their home. This answer is further explored in Chart 5.6, where the geographical spread of responses is illustrated.

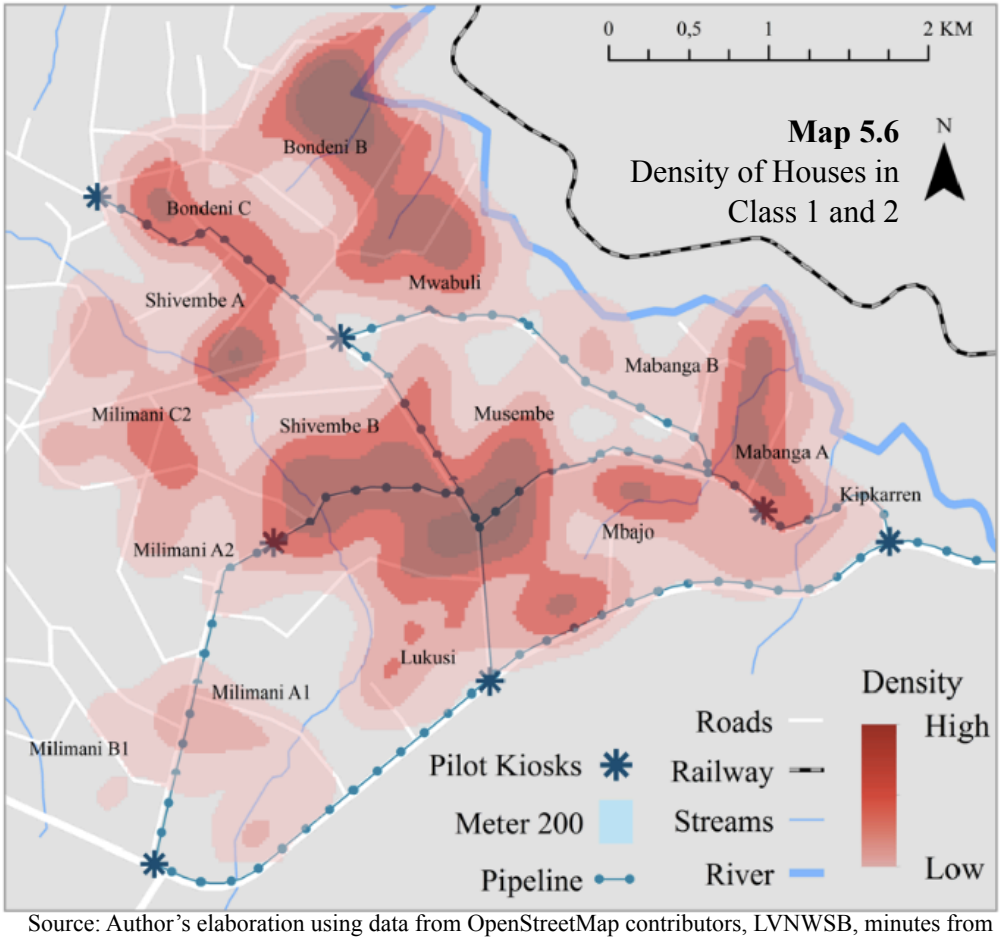
Chart 5.6 Electricity in Musembe



Source: Author's elaboration using data from question 1 and 14

Especially, Mwabuli and Bondeni are sparsely covered, as only 4 and 9 percent of the women reported that they had electricity, respectively. Mabanga and Milimani follows with 18 and 22 percent, respectively, and in the upper end are Shivembe, Lukusi, Musembe and Mbajo found where 35, 38, 39 44 percent answered that they had a connect, respectively. Finally, 64 percent of women living in Kipkarren stated that they had a connection. Of course, due to the low sample size of approximately 20 women per village, these findings should not be used conclusively. However, when compared to the density of different house classes within the project area, evidently, the

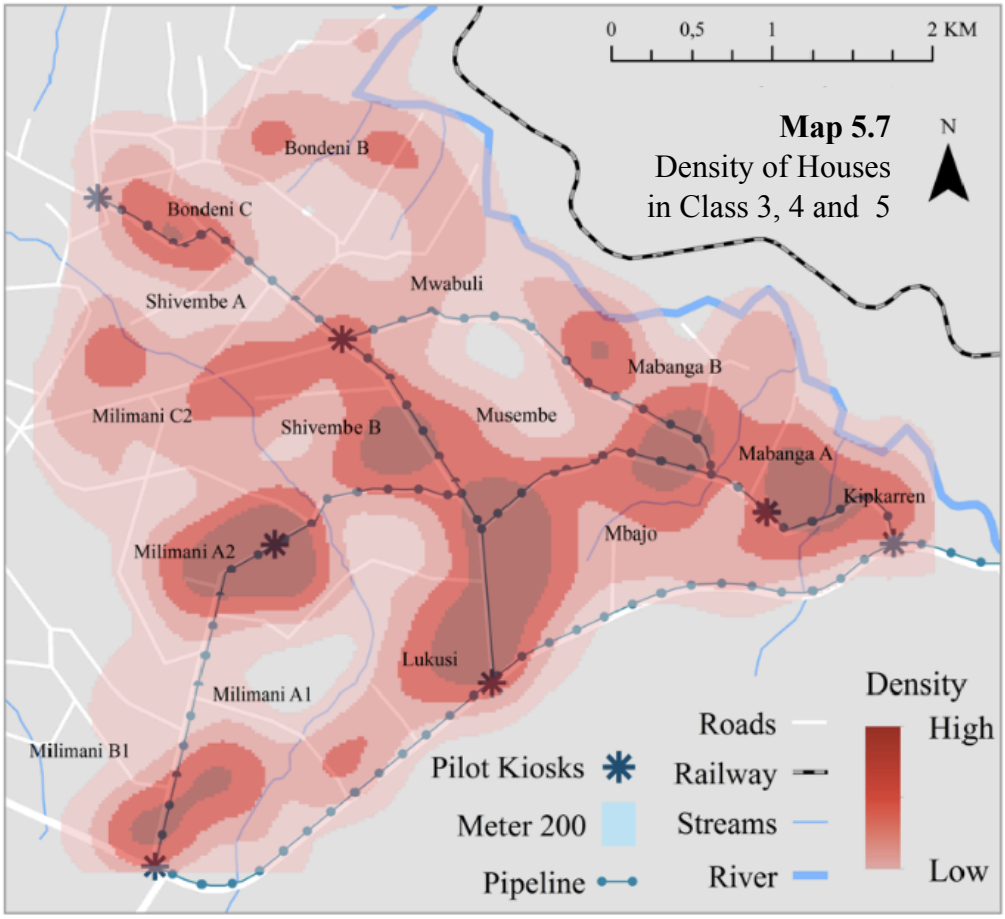
patterns of electricity connectivity is reflected in house distribution. In order to illustrate this point, I have made a density analysis of houses in class one and two, as they consist of houses build with local materials, indicating a lower economic class, and thus less likely to engage in investments, as discussed above (Map 5.6).



Source: Author's elaboration using data from OpenStreetMap contributors, LVNWSB, minutes from MCWP meetings and data collected through participatory mapping

The largest concentrations of houses in class one and two are found in the area around Bondeni, Mwabuli, Musembe and Shivembe, areas that are either in the lower or upper scale of households with electricity connections. However, when the density of houses in class one and two are compared with the density of houses in class three, four and five, i.e. houses build with 'imported' materials, the picture becomes more nuanced. As illustrated in Map 5.7, the density analysis shows how there is a high concentration of houses in class three, four and five in both Musembe and Shivembe, explaining the

investments in electricity connectivity, however, the density of these houses in Bondeni and Mwabuli is very low.



Source: Author's elaboration using data from OpenStreetMap contributors, LVNWSB, minutes from MCWP meetings and data collected through participatory mapping

The density analysis do not tells us whether it is only the richer households who have electricity connections, however, increasing number of households with electricity will entail better coverage of transformers, and thereby the accessibility in the area. Thus, the entry barrier to access private connections to electricity, or water in the case of the MCWP, is higher for people living outside the reach of transformers or tees to which you can connect a private pipeline. The areas with a high density of houses in class one and two along with a low density of household three, four and five, may be more vulnerable to end in this out-sider position as there are less individual households likely to make investments in the necessary facilities. In light of Himley's (2008:444) discussion of environmental governance, there is a risk of social distortion as 'the

interests and demands of particular class factions frequently drive the rescaling of modes of environmental governance; this rescaling, in turn, serves to structure and delimit what social groups in what geographical regions are able to participate in decision-making regarding resource use and environmental management'. Consequently, households in Musembe may experience an increasing gap in inequality, as those who can afford investments in electricity and water will own houses at more worth than those who are not able. This was noted by several women in the survey who pointed to the fact that houses close to roads and electricity were substantially more expensive than houses close to the river, away from main roads. Going back to the decision-making processes, the CBO's decisions to invest in expansions that will broaden the distributional width (pipeline into new areas) of the project compared to the depth (extensions of pipeline within the project area) may create an uneven distribution of water in Musembe, that consequently will benefit the people who are 'able' (or living in areas where extensions are paid for) to get private connections, whereas those who live in areas mainly constituting of households that are not able may experience exclusion of the project.

6 Conclusion

The present thesis took off with the objective to analyse decision-making processes in terms of distribution and access, as articulated in the research question; *How is power spatially articulated in the coverage area of the MCWP?* This thesis engaged such an analysis by looking beyond the conventional statements and conceptualisations of community and participation in order to find the underlying power structures which could determine accessibility. The interest for such approach was sparked by the geographical scholarships on environmental governance, arguing that the governance of natural resources has transformed from being a matter of state-centric affairs to being governed through networks consisting of both public and private actors. Indeed, the case at hand is an example of a water resources management that is driven by a network where several actors are taking part in the decision-making processes. The collaboration between actors, however, is not necessarily harmonic. On the contrary, this is often a

contested process where the reconfiguration of resource management is steered by interests of specific groups determining how resources are socio-spatially accessed, however, we also see that water's biophysical properties may disrupt and shape this management disregarding social class. Even though the CBO managing the MCWP is established within the state framework of water management, the members, and in particular Khayanga Wasike, are contesting the same governance arrangement through demanding increasing autonomy and power over decisions of water accessibility. The reconfiguration of how water resources are managed shifts boundaries between different actors, leaving increased obscurity of roles and responsibilities, which, in the case of the MCWP, is illustrated in the narrative analysis where various actors perceive processes differently.

Digging deeper into the processes of decision-making, critical scholars (e.g. Cooke and Kothari, 2001, Sutana, 2009) argue how the conceptualisation of community and participation is often left unexplored by development projects which assume that communities are homogenous groups where participation is a harmonious process used as means to increase ownership and empowerment. These assumptions are blind to power asymmetries which eventually determine inclusion and exclusion of different groups in the community. The case at hand is no exception, as the CBO is equated with a project that is community-driven. This becomes problematic as the CBO members have been chosen based on networks and class, thus restricted by entry barriers that not all community members may be able to meet. The de-linking of power and social-relations thus fails to recognise how people situated in the better half of the hierarchy may have better networks than others, which can be used to reinforce existing power structures. The participation of all community members is reduced to the act of physical labour in terms of digging trenches for the pipeline. CBO members argue that this will entail a sense of ownership, however, the decision of this has been made solely by CBO members, without negotiating the notion of participation with other community members. The decisions regarding distribution are also taken by members at CBO meetings. In order to analyse the power asymmetries driving these decisions, discourses on gendered analyses of participation argue that participation should be analysed in

terms of influence in decision-making processes along with benefits accumulated through the participation. Regarding the decisions about location of water kiosks and pipeline determining how water will be distributed in Musembe, it is found that while few members partake in most meetings the majority are only present in a limited number of meetings; thus, decisions are made in small forums. Consequently, decisions that impact the community as a whole are influenced by the priorities of a limited number of people. Thus the notion of participation should expand to include analysis of what actors participate, with what means and to what extent and outcome. The heterogeneity of participation does also extent into the concept of spatialised subjectivities, implying that subjectivities are shifting and contested and people therefore act differently depending on the spatial setting. As decisions in community projects predominantly are taking place within the public sphere, cultural norms shape how a person is participating. As the case at hand is situated within a male-dominant culture, women are especially constricted in the ways of participating in public space.

CBO members, however, are not solely influencing how the distribution of water will play out, as water in itself also plays a determining role. Nature in general is often perceived as a pool of resource from which people use as they see fit. However, greater attention to the bonds between people and nature, shaped through everyday practices, deepens the understanding of how projects of resource management are perceived by different actors. In Musembe, it is predominantly women who interacts with water, and the findings in this thesis show how this interaction, e.g. the distance they walk to fetch water, determines the grounds on which they are willing to purchase water at kiosks as distributed by the MCWP. The coverage of water kiosks do not ensure that every household will have a reduced distance to water, and this inequality in accessibility may eventually influence how various people perceive the project as succeeding or failing to meet their needs. The possibilities of water distribution includes the alternative of private connections. Water, being difficult to transport, requires high material investments. Such investments, however, goes beyond the scope of the MCWP budget, thus, leaving it to the individual households to gather capital for undertaking such investments. As Musembe is characterised by being poor and rural, the spread of private

connections will most likely be limited to the few who can afford, entailing a distortion in the equality of how water is accessed. As a result, the ‘uncooperativeness’ of water influences how distribution may benefit some, those who are able of obtaining a private connection, while causing distress for others, i.e. those who cannot afford such connections. Evidently, the case of MCWP is not a case of a community-driven project where decisions are made in processes of harmonised participation. Scratching the surface shows a picture of a project that is shaped and driven by specific actors in related networks whose interests and decisions determine how different groups in various socio-spatial settings access water, illustrating the importance of critically analysing resource management in the context of the community.

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Appendix

Interview Guide

CBO Members - Approx. 30 minutes

Background

- Where do you live?
- How long have you been living in Musembe?
- What is/was your work?

Interest in MCWP

- When did you get involved?
- How did you hear about the project?
- Did anybody encourage you to become a member, do you know why?
- Why did you want to get involved?

MCWP

- As a member, what is your role in the project?
- How often do you meet?
- What is the purpose of the meetings?
- Who do you see as the main drivers of this project?

Distribution

- How will people get hold of water?
  - Kiosks - who chose the locations? Why do you think that these locations were chosen? Who do you think will use the kiosks?
  - Private connections - how can you get a private connection? Are you planning to get one?

Community

- What is the role of the community?
- How do you spread knowledge of the project?

Questionnaire

Questionnaire	
1. Village	
2. What is your work?	
3. What is your husband's work?	
4. Who fetches water?	You
	Husband
	Children
	House help
5. Where do you get water?	BH NBH S
6. How long time does it take to go from your home to the stream?	0 - 10 10-20 20-30 30-40 40 +
7. Do you treat water? (WaterG)	Yes No
8. Have you heard about the Musembe Community Water Project? (where Khayanga Wasike and Willis Ndote are members)	Yes No
	Baraza
	Village Elder
	Board Mem
	Other
9. If they asked you, would you/family member volunteer to dig trenches?	Yes No
10. Are you willing to buy treated water at a kiosk 1. Closer? 2. Further away?	1 Yes No 2 Yes No
11. Would you pay for a connection to your home?	Yes No
12. Who would pay for the connection?	You Other Husband
13. If not you, would your husband easily agree or would you have to discuss?	Yes No
14. Do you have electricity?	Yes No