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GENDER-BASED INEQUALITIES IN ACCESS TO WATER AND SANITATION IN SOUTH AFRICA: CASE STUDY OF TWO INFORMAL SETTLEMENTS

BY

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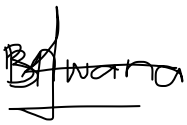
DECLARATION

I declare that this thesis is my unaided work. It is submitted for the degree of Doctor of Philosophy (Public Management) at the Faculty of Commerce, Law and Management at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University

Signature:  Date: 6/05/2021

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ABSTRACT

This study is concerned with understanding the specific configurations of the institutional and infrastructural arrangements in two informal settlements that exacerbate or mitigate women's access to water and sanitation services.

The study draws on a comparative case study design with some elements of ethnographic design in two informal settlements based in Cape Town and Johannesburg as case studies. The QQ Section informal settlement is situated in Cape Town, Khayelitsha. The settlement is dense, it is located on state-owned land with servitudes and it falls under the City of Cape Town municipality (CoCT) which is governed by the Democratic Alliance (DA) and it falls within Ward 89, which is an African National Congress (ANC) led Ward. The second settlement is the Marlboro South informal settlement, which is situated in Johannesburg, Marlboro. The settlement is located in an industrial area with shacks situated inside and outside around abandoned private-owned warehouses. Marlboro South falls under the City of Johannesburg (CoJ), which was governed by the DA from 2016 to 2019 when the fieldwork of this study was conducted. Furthermore, Marlboro South is divided into two wards, Ward 108 is ANC-led and Ward 109 is DA-led. Both settlements further adhere to other formal and informal institutions of power such as Civil Society Organisations (CSOs) and community leadership institutions. All these factors have shaped water and sanitation services, which further affect women’s access to these services in both settlements.

The study reveals that the effects of the institutional and infrastructural arrangements on water and sanitation result in women experiencing unsafe access, health and hygiene challenges, maintenance challenges of water and sanitation facilities, gender-based discrimination at the household and community levels and the marginalisation of women resulting from not having private connections to water and sanitation infrastructure in the two case studies.

This study uses the qualitative research approach, the data was collected using in-depth household interviews, focus group discussions and key informant interviews in both settlements. The sampling method used in this study was purposive sampling with women as the study respondents in the two informal settlements.

Keywords: gender, power, institutional arrangements, infrastructural arrangements, water access, sanitation access, informal settlements.

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ACRONYMS

UN-Habitat	United Nations Human Settlements Programme
UPE	Urban Political Ecology
FUPE	Feminist Urban Political Ecology
SAHRC	South African Human Rights Commission
SALGA	South African Local Government Association
SERI	Socio-Economic Rights Institute of South Africa
CSO	Civil Society Organisation
UN	United Nations
CoCT	City of Cape Town
CoJ	City of Johannesburg
DAG	Development Action Group
DoHS	Department of Human Settlements
SANCO	South African National Civic Organisation
ABM	Abahlali baseMjondolo
CORC	Community Organisation Resource Centre
MWCC	Marlboro Warehouse Crisis Committee
FEDUP	Federation for the Urban Poor
ISN	Informal Settlements Network
ANC	African National Congress
DA	Democratic Alliance
DWAF	Department of Water Affairs and Forestry
NWRS	National Water Resources Strategy
FBW	Free Basic Water
DWS	Department of Water and Sanitation
CLGF	Commonwealth Local Government Forum
SJC	Social Justice Coalition
DoH	Department of Housing

NPO	Non-Profit Organisation
ESP	Expanded Social Package
UJ	University of Johannesburg
PFT	Portable Flush Toilets
DPLG	Department of Provincial and Local Government

CHAPTER 1
GENDER-BASED INEQUALITIES IN ACCESS TO WATER AND SANITATION IN SOUTH AFRICA: CASE STUDY OF TWO INFORMAL SETTLEMENTS

1.1 Introduction

The effects of the institutional and infrastructural arrangements of water and sanitation access in informal settlements have gender implications with women being the main gender group most affected. The apartheid regime built South African urban areas in such a way that the black population are placed at the outskirts of urban areas. Harrison and Todes (2016) claim that the post-apartheid urban spatial policy was created to improve the urban poor's access to the urban advantage which includes: access to jobs, livelihood opportunities, urban services and other amenities. However, Huchzermeyer (2006) argues that the post-apartheid town planning and urban management has failed to reorganise urban areas into more equitable areas in which South Africa's various social groupings can coexist and income inequalities slowly close. The pro-poor policies adopted in South Africa after 1994 have reinforced people's exclusion by subsidising a small level on their cost of living, rather than supporting better location decisions and ensuring better access to basic services, including water and sanitation (Turok, 2014). As a result, the poor urban population find shelter in unhealthy informal settlements that lack access to water and sanitation services.

Informal settlements are defined by the UN-Habitat (2003) as settlements that are mostly built on public and private land or building properties that are owned by absentee landlords. According to van Niekerk and Le Roux (2017), informal settlements develop spontaneously without any intervention and planning from the government. There is further little information regarding the land invaders or sometimes with little information regarding the owners of the land on which dwellings are built. Satterthwaite et al. (2020) further support this argument by claiming that urban settlements develop outside the legal systems intended to record land ownership and tenure and enforce compliance with regulations relating to planning and land use. Conditions in informal settlements are often dire. According to Arimah (2001) people living in informal settlements experience the most

awful living and environmental conditions, they are excluded from participating in the economic, social, political and cultural spheres of urban areas. Marx et al. (2013) support this argument, the scholars argue that informal settlements are the most deprived and excluded form of settlements. Marx et al. (2013) further argue that the settlements are characterised by poverty overcrowded and congested conditions often with longstanding patterns of exclusion towards water and sanitation services.

These issues have resulted in the use of multiple types of formal and informal water and sanitation infrastructural practices. The multiple types of water and sanitation infrastructural practices and conditions of the settlements allow for gender-based inequalities in access to such services to be worse with women being the most gender group negatively affected (Tacoli, 2012). Gender considers the biological differences between men and women that influence what they need from water access and sanitation facilities, and how often they use those (Geertz & Iyer, 2018). As a result, women have different biological functions from men which require specific water and sanitation needs. Beyond these biological differences are the social and cultural constructs of what it means to be men and women. These factors shape how women access water and sanitation in informal settlements.

Furthermore, access to water and sanitation services in urban informal settlements is the subject of continuous discriminatory negotiations by the different institutions of power working in such settlements. These power institutions ensure that water and sanitation are accessed through systems that result in women by their gender being placed in marginalised positions, where they cannot participate in exercising their powers and rights in shaping the rules of how these services are accessed (Truelove, 2011). This view is further shared by Matsie (2019) who argues that the gender-based inequalities in access to resources and services in informal settlements are linked to gender relations that are biased towards male power and marginalise the voice, agency and influence of women.

As further argued by the African Institute for Children Studies (2015) that the unequal gender power relations that exist in informal settlements are constructed in society and reinforced within households, and they further manifest in individuals and communities.

This leads to situations where issues related to water and sanitation have to be negotiated within the context of unequal gender power relations, roles and responsibilities, both within and outside the household (Acey, 2010). Moreover, Chant and Mcilwaine (2013) argue that gender-based discrimination whether it is done as a matter of law or done as a matter of practice, undermines human rights, human dignity and the principle of equality.

According to Bapat & Agarwal (2003), women who have never had to rely on public shared standpipes, water tanks or other peoples' taps, public shared dirty toilets, buckets and open defecation which expose women to different vulnerabilities will never fully understand how unsafe, humiliating, tiring, stressful and inconvenient this is. Hence, it is important that all water and sanitation programmes in informal settlements fully acknowledge the specific water and sanitation needs of women. As a result, water and sanitation access in informal settlements is affected by the infrastructural and institutional arrangements that allow for issues related to the marginalisation of women to be more severe in such settlements. Thus, tackling gender inequality in urban water and sanitation services becomes a necessity as this is an important factor impacting women's vulnerabilities mainly in informal settlements.

Moreover, as much as there are studies which have been undertaken regarding the water and sanitation struggles of women in informal settlements, issues related to how the types of water and sanitation practices used in settlements with different informal contexts that adhere to multiple power institutions politically and socially affect women are limited. This study stems from the premise that informal settlements are heterogeneous with multiple water and sanitation infrastructural arrangements and they adhere to different power institutions at the social and political levels. All these different factors present certain challenges regarding gender, water and sanitation access in such settlements.

Therefore, this study uses two informal settlements with different informal characteristics: one located on state-owned land with servitudes and the other located in an industrial area with dwellings placed within and around private-owned abandoned warehouses. The two case studies are used to determine how the infrastructural and institutional

arrangements in each of the settlements affect women's access to water and sanitation services.

1.2 Problem statement and research objectives

Despite the improvements made in terms of water and sanitation access after 1994 in South Africa, women in informal settlements still carry the burdens and struggles presented by poor access to these services. For women access to water and sanitation is more than having a tap or a toilet. As such, the types of formal and informal water and sanitation arrangements used in informal settlements subject women to life-threatening vulnerabilities. While the social and political dynamics that further shape access to such services in informal settlements can further worsen these vulnerabilities. As a result, tackling gender inequality in relation to infrastructural and institutional water and sanitation arrangements is necessary as these are important factors impacting women's vulnerabilities in access to these services mainly in informal settlements.

While poor access to water and sanitation has a generally negative impact on the livelihoods of individuals (Emeasoba et al., 2017; Khatri & Vairavamoorthy, 2007), there is considerable literature that recognises the disproportionate impact on women mainly residing in African urban informal settlements (Chant 2013; Ramírez & Sañudo-Fontaneda, 2018; Tacoli, 2012). This is due to several issues which impact women. Women are the primary caregivers and home keepers in most poor urban African communities (Bryceson, 2019; Chant, 2013) and women are specifically vulnerable to the health effects of poor sanitation (Kwiringira et al., 2014). In informal settlements where water and sanitation services are located outside of the home, women are vulnerable to sexual and gender-based crime when accessing these services (Chant, 2013; Hawkins et al., 2013; Ramírez & Sañudo-Fontaneda, 2018).

Thus, the assumption made by this research is that access to water and sanitation, which results in gender-based inequalities is co-determined by (a) the social and political context which frames access (I will here refer to as the institutional arrangements); and (b) the material conditions within which water and sanitation are accessed (I will call the

infrastructural arrangements). By institutional arrangements, I mean both the broader policy and political context (at government level) but also other formal structures such as Civil Society Organisations (CSOs) and the more informal social dynamics within each settlement, such as the local community organisations. The infrastructural arrangements include *inter alia*, the nature and characteristics of the settlement, the type, amount, distribution and availability of infrastructure.

Given the heterogeneous nature of informal settlements, this study compares two informal settlements with different characteristics. The first settlement is the QQ Section informal settlement which is located in Cape Town. QQ Section is situated on state-owned land with servitudes. The second settlement is the Marlboro South informal settlement which is located in Johannesburg. Marlboro South is situated inside and around abandoned private-owned warehouses. Furthermore, both settlements adhere to different political parties who are in power at the municipal and ward levels. There are further CSO and community leadership institutions present in the two settlements. These dynamics in both the settlements affect water and sanitation access and provision.

Therefore, the primary research aim of this project is:

- To understand the specific configurations of institutional and infrastructural arrangements in two informal settlements that exacerbate or mitigate women's access to water and sanitation services.

In other words, recognising that women are a particular sub-category of people adversely affected by poor access to water and sanitation, particularly in African urban informal settlements. This study considered two case studies to better understand the configurations of the infrastructural conditions and the broader institutional context.

The broader aim is broken down into three primary methodological and intellectual tasks: i.e.

- To determine and contrast the two settlements in terms of their socio-political dynamics within which water and sanitation is accessed

- To determine and contrast the two settlements in terms of their material conditions within which water and sanitation is accessed

- To determine and contrast the implications of the socio-political dynamics and the material conditions on women's access to water and sanitation services in the two settlements.

1.3 Key analytical concepts

Urban political ecology

In the 1960s and early 1970s the First World Political Ecology seemed to have emerged as a reaction to the neglect of the political dimensions of the interaction between humans and the environment in a rural context (Bryant, 2015). Social scientists who concentrated on cultural ecology saw it as important to understand how the human population fit within ecological systems (Greenberg & Park, 1994). As such "Political Ecology has developed as a multi-dimensional research agenda over the past four decades, influenced by diverse critical theoretical perspectives that all aim to relate environmental and ecological processes to socio-economic and political dynamics" (Bryant, 2015, p. 141). According to Abeysekera (2007), Political Ecology is a term that summarises a range of issues regarding the environment and how the impacts of the changing environment affect people's lives and livelihoods (Abeysekera, 2007). Furthermore, Swyngedouw (2015) argues that even though Political Ecology has a variety of epistemological perspectives ranging from Marxism to post-structuralism and beyond political ecologists have a common understanding. They agree that political issues are not the only factors in grasping and influencing trajectories of socio-ecological change and transformation, but also that the physical and biological factors matter politically. Thus, the issues no longer involve bringing environmental factors into the sphere of politics as it was before, but it now rather focuses on how to bring the political into the environment.

Furthermore, Swyngedouw (2015) claims that Political Ecology looks beyond questions of natural resources it further interrogates how governance and power relate to the movement of people. The origins of Political Ecology emerged from a rural context, as these were the areas where humans were perceived to have implications on the ecological environment and natural resources. As such, these resources were the main means that people depended on for survival in rural areas. Scholars of Political Ecology such as Blaikie and Brookfield (1987) used soil degradation in relation to Political Ecology to illustrate the impact humans have on natural resources in rural areas. The authors argued that the deeper causes of land degradation were more a social problem rather than of the characteristics of soil, geology and climate and purely physical constraints of natural sciences. Angelo and Wachsmuth (2015) explain that the exclusion of urban areas in the First World Political Ecology was due to the understanding that urban areas were already conquered by society, and could not be restored because there was no environment left to be restored.

Although using small rural populations to explain their problematic nature and interrelatedness to ecological systems was successful, however, applying simple ecological models to human societies soon became challenging (Greenberg & Park, 1994). Some analyses were accused of

> reifying the ecosystem and over-emphasizing its self-regulatory characteristics and stability. Others were criticized for having no clear criteria for determining the boundaries of systems and of minimizing the interactions between defined local populations and larger wholes in which they are embedded economically and politically (Greenberg & Park, 1994, p. 4).

Furthermore, Doshi (2016) argues that the interaction of the environment and urbanisation creates a particular set of social relations. As it is visible today that urbanisation accompanied by population growth and the formation of informal settlements in urban areas present ecological problems and conflicts around the environment in which people live, endure and affect their livelihoods. All of these processes occur in the terrains of power in which people find it difficult to defend and create their environment in a context

of class, ethnic, race, gender conflicts and power struggles (Swyngedouw & Heynen, 2003). With these challenges it became more apparent that Political Ecology needed to be applied to the urban context (Doshi, 2016). The exclusion of the urban environment in the First World Political Ecology was a fatal error, as it initially overlooked the growing range of ecological problems and it placed aside conflicts around the environment in which more people reside, and in which more people endure and shape in their everyday lives (Zimmer, 2010).

In the 1980s Political Ecology began to evolve, scholars from different academic backgrounds started to examine the links between the environment and political activities in urban parts of Asia, Africa and Latin America and this was termed Third-World Political Ecology (Bryant, 2015). Third-World Political Ecology involves the understanding of the political economy of environmental change in the third world (Bailey & Bryant, 1997). According to Heynen (2014), as part of the Third-World Political Ecology, Urban Political Ecology (UPE) was introduced in the late 1990s early 2000s. UPE explains how the dynamics of power function using neo-Marxist power perspectives, actor-oriented power perspectives and variations of discursive power perspectives drawing on poststructuralism (Svarstad et al., 2018).

Neo-Marxism stresses the exercise of power through economic domination and exploitation. This is achieved by examining the “processes of capital accumulation as socio-natural transformation, and the contestations and conflicts that arise” (Lawhon et al., 2014, p. 6). Swyngedouw (2006) explains that the processes often applied in urban areas by those in power, create the material re-production of urban areas. The projects and processes which are often implemented are done in such a way that they are closely connected to the city to control nature and to produce commodities with use values and exchange values for capital accumulation (Swyngedouw, 2006). In this way urban areas are a part of networks that spread across the local through to the global, joining humans and non-humans alike. In the actor-oriented approach power is understood as being exercised by actors, which are contrary to the belief of power being perceived as a force likely to pass individuals with no consciousness. In the actor-oriented approach Engelstad

(1999) argues that actors are seen to exercise power through actions to achieve particular intentions (intentionality), the actions take place between two or more actors (relationality) and the actions produce an intended result (causality).

The poststructuralist power perspective is understood in three scopes such as: biopower, governmentality and discursive power. “Biopower implies that in order to secure lives, governmental concerns have emerged about various populations' qualities such as health, and opportunities for improvement” (Svarstad et al., 2018, p. 358). Governmentality is understood as ways in which governments administer citizens to act according to government priorities (Foucault, 2008). Discursive power is exercised when actors such as corporations, government agencies or NGOs, produce discourses and manage to get other groups to adopt and contribute to the reproduction of their discourses. As such UPE shows how these power dynamics produce inequalities and uneven experiences of service delivery or access to key resources in urban areas (Rodina & Harris, 2016).

Feminist urban political ecology

One dimension of Urban Political Ecology that is central to my inquiry is the Feminist Urban Political Ecology (FUPE). The socio-environmental changes that result in the continuous production of new natures and new urban social and physical environmental conditions especially for women in urban informal settlements led to the emergence of FUPE in the early 1990s. The feminist scholars began to embrace the complexity between gender and the environment, and they termed this FUPE (Rocheleau et al., 1996). As per the FUPE theory, gender just like class, race and other relevant factors of power, should shape access to and control over natural resources. According to Sultana (2011), FUPE shows the importance of gender in struggles for various resources in urban areas. Urban areas are places where people compete for resources, including basic services, and it is often the poor women who cannot afford who struggle to access even the basic of services. Hence, there is a sprawl of informal settlements to accommodate the poor who cannot afford proper decent shelter. As a result, the FUPE framework brings forth the complex picture of gender-related aspects which are negotiated through social

and political processes such as power, class, culture, and social relations while at the same time they intersect with ecological approaches such as the natural environment (Adams et al., 2018; Sultana, 2011).

Thus, in this study, the FUPE helps to address the problematic ways in which power dynamics determine the distribution of women's access to basic water and sanitation services in informal settlements that are important for survival (Doshi, 2016).

However, UPE has certain gaps that directly affect FUPE. The first gap is that UPE does not clearly define what constitutes as being "urban" this tends to be problematic as this theory applies challenges that were applied in rural areas, in the First World Political Ecology, to urban settings (Zimmer, 2010). Yet, ecological challenges faced in urban areas are different from those faced in rural areas. Taking FUPE into account, urban women face different struggles when it comes to access to resources and living conditions compared to rural women. The unequal gender power relations often created by societal beliefs influence individual behaviour, social institutions and governmental local power institutions mainly in urban informal settlements, which further have negative implications on women in these areas (African Institute for Children Studies, 2015).

Consequently, the notion of power and access to resources such as water and sanitation for women in urban informal settlements is twofold. First, women in such settlements are marginalised by those who hold power over these resources in such areas. Since women who reside in such settlements are predominately poor and cannot afford to pay for the required quality and quantity of water and sanitation services, government and service providers often divert and block resources from these areas to elite areas where they will recover costs. Women in informal settlements are often left to fend for themselves to obtain water and sanitation services. Second, other unequal gender power relations in access to water and sanitation women often face are at the household and community levels. These unequal gendered power relations include relations which are often hostile between women and women at community level regarding access to water and sanitation

as well as unequal power relations between men and women at both household and community levels regarding water and sanitation access.

Furthermore, Ruxton (2004) argues that society specific factors in many urban areas have social norms that increase favouritism towards men. Access to water and sanitation are fundamental human rights and access to these services should be equally distributed and benefit all citizens. Yet, women are taught to be obedient, powerless, and voiceless, and men's abilities are valued more highly than those of women when water and sanitation projects are initiated in informal urban areas (Ruxton, 2004). These are important factors that need to be unpacked and cannot be unpacked without defining what "urban" means and the unique challenges faced by women in urban informal settlements compared to rural areas.

Additionally, as further argued by Lawhon et al. (2014) the other gap is that Western feminist scholars tend to use a generalised approach when looking at the challenges faced by women. Yet, evidence shows that there are distinct challenges, especially when looking at water and sanitation access that poor women residing in informal settlements in developing countries experience, which are not necessarily experienced by women in developed countries (Ingmansson, 2018).

As a result, in this study, I propose to augment the current FUPE frameworks and use a FUPE that incorporates all the key factors that have been neglected in the current FUPE framework. Using this lens to look at water and sanitation challenges presented by informal settlements, this study provides a variety of perceptions that allows one to have a deeper understanding of how urban poor women particularly those residing in informal settlements experience access to these services. Thus, this study highlights how the infrastructural and institutional arrangements affect women's water and sanitation access in urban informal settlements.

1.4 Structure of the study

Chapter 2 presents the literature review and it is divided into three broad sections. The first section gives a discussion of the key debates around the infrastructural dynamics of water and sanitation in the informal city. The second section gives a discussion of the key debates around the institutional dynamics of water and sanitation in the informal city. The third section deals with the key debates on gender and access to water and sanitation in the informal city.

Chapter 3 covers the research methodology used in this study. In this regard, the qualitative research approach as the best suitable approach for this study is discussed. The choice of using a comparative case study design with ethnography elements is explained and the reason for choosing to compare QQ Section and Marlboro South informal settlements are also explained. Furthermore, purposive sampling as the suitable sampling method is outlined and a discussion on the type of study participants is given. The chapter further sets out the qualitative data collection instruments used in this study and presents the data analysis and analytical approaches used to analyse the data. Moreover, a report on the fieldwork that was undertaken in each of the two case study areas is given in the chapter. The chapter ends with a discussion of the ethical considerations and study limitations.

Chapter 4 gives an overview of the water and sanitation policy framework with a particular focus on the decentralisation of water and sanitation and gender and how these factors have been handled in South African informal settlements.

Chapter 5 deals with the institutional arrangements within which water and sanitation are accessed in the QQ Section and Marlboro South informal settlements. The first section of the chapter discusses findings on the institutional dynamics and the way that they have affected water and sanitation in QQ Section. The second section discusses the findings of the institutional dynamics and how they have affected water and sanitation in Marlboro South. The third section of the chapter gives an analytical comparative discussion of the institutional arrangements and their implications on water and sanitation access in the

two settlements. The analysis reveals the ways that the political alliance system, political contestations, political parties pushing the interests of the party at a government institutional level affect water and sanitation access in informal settlements. While at the CSO level the analysis reveals how the lack of transparency and accountability affects water and sanitation access in the two settlements. In community leadership institutions the analysis demonstrated how not having written enforced guiding principles and accountability mechanisms, lack of determination, will power and involvement in the community leadership institutions and allowing the institutions to work independently from the settlements are the main factors that lead to the failures of the community leadership institutions in assisting the settlements with water and sanitation access.

Chapter 6 deals with the infrastructural arrangements within which water and sanitation are accessed in QQ Section and Marlboro South. The chapter starts by outlining the characteristics of the study respondents in QQ Section and then it moves to outline the findings of the infrastructural dynamics where the types of formal and informal water and sanitation practices used in QQ Section are outlined. Furthermore, the type of access presented by the practices in QQ Section is outlined. The second section of the chapter deals with the Marlboro South case, the section starts with an outline of the characteristics of the household study participants in Marlboro South. Additionally, the types of formal and informal water and sanitation practices are highlighted and the type of access presented by the practices are further explained. The last section of the chapter gives an analytical comparative discussion regarding the infrastructural arrangements and their implications on water and sanitation access in the two settlements. The analysis reveals the implications on formal water and sanitation infrastructural development resulting from a settlement that is located on state-owned land as in the case of QQ Section compared to a settlement located on private property as in the case of Marlboro South. Moreover, the analysis also reveals how settlements located on land with servitudes as in the QQ Section case and settlements located in an industrial area as the Marlboro South case affects formal water and sanitation provision.

Chapter 7 undertakes a comparative case analysis of the gender implications of the institutional and infrastructural arrangements. The chapter gives discussions around challenges of safety, health and hygiene, maintenance of water and sanitation arrangements, gender-based discrimination at the household level and marginalisation of women resulting from not having private connections to water and sanitation infrastructure as the key challenges women face resulting from the institutional and infrastructural arrangements. The chapter further gives a discussion of the conceptual significance of the FUPE framework in this study.

Finally, in chapter 8 the thesis is drawn to a close through a summary of the study, the knowledge contribution and the recommendations for future research.

CHAPTER 2
LITERATURE REVIEW

2.1. Introduction

This chapter considers three broad bodies of literature. The first body of literature is what this study refers to as the infrastructural dynamics of access to water and sanitation in urban informal settlement areas. In other words, this chapter looks at the material conditions that shape access in urban informal settlements. Regarding the infrastructural dynamics, this chapter outlines how land tenure dynamics, the nature of the land and the growth of informal settlements affect water and sanitation infrastructural provision, in these settlements. Furthermore, literature debates on the everyday water and sanitation practices used in informal settlements will be given.

The second body of literature is what this study refers to as the institutional dynamics of access to water and sanitation in urban informal settlements. In other words, the socio-political context within which water and sanitation access occur. In this regard, literature discussions on the role of government, CSOs and community leadership structures on water and sanitation services in the informal city are given.

The last section of this chapter considers literature debates around gender and access to water and sanitation in the informal city.

2.2 The infrastructural dynamics of water and sanitation in the informal city

Accessing water and sanitation services in the informal city

The land on which informal settlements are situated is a key determining factor when it comes to water and sanitation infrastructure development. Rubin (2011) argues that informal settlement dwellers often invade private or public land where they do not have tenure security. As such, these conditions complicate water and sanitation infrastructural development and provision. According to McGranahan (2015), governments and service providers avoid implementing water utility systems and sewer systems on private or public land for people not formally registered as the owners of the piece of land. These

institutions see no use in installing infrastructure in an area where there is a possibility that the occupants will be evicted from the land (McGranahan, 2015). Furthermore, Sjöstedt (2008) claims that governments and service providers are sceptical in providing water and sanitation services to informal settlement dwellers, as the provision of these services can be perceived as acknowledgement or recognition of their rights to the land. As a result, it becomes more difficult to evict the occupants when the rightful owner wants to develop the land or government wants to use the land for other purposes. Additionally, Evans (2007) stipulates that the provision of the services can be further perceived as a way of encouraging land invasion. Similar conditions persist in South Africa, as argued by SAHRC (2014) that the South African government is experiencing challenges in supplying water and sanitation to people residing in informal settlements, due to the nature of the settlements and tenure conditions, which serve as a hindrance in installing water reticulation systems and sewer systems. The government, therefore, avoids installing water and sanitation infrastructures in such settlements, to avoid legal liabilities which can emerge from indirectly acknowledging the informal settlements.

While land tenure dynamics affect water and sanitation infrastructural development other scholars highlight the unsuitable nature of the land where some settlements are located as another hindrance to water and sanitation infrastructural development (Mesgar & Ramirez-Lovering, 2021; Scott et al., 2015). This argument is further supported by (Dagdeviren and Robertson, 2011; UN-Habitat, 2003) who claim that some informal settlement dwellers invade land that is located at the edge of urban areas, land with servitudes which is often prone to flooding, land located on steep hillsides and land that is in proximity to industrial plants with toxic emissions or waste disposal sites. According to Rubin (2011), the reasoning behind the invasion of such land is that the land is cheap and the chances of the land being developed for other uses are very low. As such, Dagdeviren and Robertson (2011) argue that settlements that are located on these types of land are usually densely laid and rarely leave land for non-residential uses or the land itself is not safe for residential purposes. These characteristics make the installation and expansion of water network utilities and sewer systems technically difficult (Isunju et al., 2011). These arguments show that installing water reticulation systems and sewer

systems in settlements located on unsuitable land is very difficult and can also be impossible.

Whereas the nature of the land affects water and sanitation infrastructural development, another challenge is that informal settlements tend to erupt after all the necessary infrastructure has been installed. According to (Schrecongost and Wong, 2015; van Welie et al., 2019), many of these settlements are situated on land that lies outside existing utility service boundaries and away from existing water mains or sewer lines. While planned settlements will incorporate water utility networks using the conventional approach, this is impractical in unplanned settlements that lie outside existing water utility and sewer systems. As argued by (Royston, 2011; Schrecongost and Wong, 2015) settlements that lie outside the regulated system complicate and increase the expense of extending water and sanitation service provision to cover such areas. van Welie et al. (2019) further argue that the new water utility networks would have to deal with higher complexities associated with multiple informal institutional arrangements, poor infrastructure conditions, inefficient governance structures and heterogeneous informal settlements that require specific water infrastructural needs which are linked to issues of poverty. Hence, government and private agencies tend to be unwilling to incur more expenditure by extending and installing new infrastructures in such settlements where it will be impossible to collect user fees or taxes from the unlawful land occupiers (Sjöstedt, 2008).

Furthermore, water and sanitation services provision in such settlements is also affected by the growth and dense nature of the settlements. The continuing growth resulting in the dense nature of urban informal settlements poses difficult challenges for ensuring safe, reliable and affordable water and sanitation services in the face of growing demand for these services (Ezebilo & Savadogo, 2021). Water and sewer pipes in many African urban centres often date back to the colonial era and therefore are reaching the end of, or have exceeded, their design lifetime (Bakker, 2008). Consequently, the growth of informal settlements further puts more strain on already neglected water and sanitation infrastructure. Adding on to this argument are Mugume et al. (2015) who argue that the

existing urban water infrastructure in African urban centres was not designed to withstand emerging or unexpected threats such as urban growth and informal settlement formation. The design of water distribution systems in general has been based on the assumption of continuous supply. Many African urban areas have not kept pace with urban growth rates in the past decade, as such informal settlements have currently far outpaced the availability and capacity of the urban water infrastructure (Kilcullen et al., 2015; Thieme and Kovacs, 2015). As more people move into informal settlements the demand for water services increases, which the municipality did not plan for (SALGA, 2013). Thus, the growth of informal settlements puts more pressure on the water reticulation system causing breakages in the system, making it difficult to deliver water services to all urban residents.

While the growth of informal settlements affects water infrastructure, Hawkins et al. (2013) argue that the growth of such settlements creates worse complications for sewer systems. According to Hawkins et al. (2013), as informal settlements grow to manage ever-larger volumes of wastewater becomes more difficult and lack of space limits the use of pit latrines. McGranahan (2015) supports this argument by claiming that the increase in demand for sanitation services generates constant pressure on many poor African countries to expand sewerage systems. Yet, the conditions presented by the growth of informal settlements make it impossible to provide adequate collection and treatment systems. According to Satterthwaite et al. (2015), in urban areas human solid waste is either discharged through a pipe system using water and pumping stations or the waste is accumulated on-site in a pit or septic tank emptied periodically and taken by road to treatment sites. However, the dense nature, resulting from the constant growth of the settlements, makes it difficult to install new sewer systems, collect faecal sludge or expand infrastructure, as can be done in lower-density areas (Hawkins et al., 2013). These conditions, therefore, make removing human waste in such settlements impossible.

Furthermore, Andersson et al. (2016) claim that urban growth that results in the formation of haphazard informal settlements lead to overstretching of the sewerage system causing

frequent bursts of the sewer line, and spill over of the wastewater in unplanned areas. This poses a health risk to residents. According to Asoka et al. (2013), this is mainly attributed to the current state of urban sewer lines in Africa, which are characterised by blockages and breakages leading to the spill of the wastewater onto the roads and within neighbourhoods. As a result, the high number of poor people moving into urban areas and the sprawl of informal settlements overloads the carrying capacity of existing water and sanitation infrastructure in these areas leading to infrastructure failure. Hence, Palmer et al. (2016) argue that the complexities presented by the growth of informal settlements require highly complex networked water and sanitation infrastructures, managed mainly by massive public and private institutions.

Thus, it is clear that the different factors associated with informal settlements affect urban water and sanitation infrastructural development. The debates in this section show that water and sanitation infrastructural development is not a linear process in informal settlements, different factors often present difficulties in providing water and sanitation services in such areas. These factors should be considered when plans of water and sanitation infrastructural development are made, as they form part of the factors that frame water and sanitation access in such settlements.

Everyday practices of water and sanitation access in the informal city

As water formally regulated infrastructures fall short to cover present and future water requirements in informal settlements, the emergence of new informal water hybrid infrastructures continue to develop to fill the supply gap (Bakker, 2008). As a result, informal settlements in Africa have developed into heterogeneous urban landscapes that are made up of highly diverse formal and informal water practices that adhere to different operational and service delivery models (Ahlers et al., 2014).

As argued by Misra (2014), the use of the terms in describing water practices has indeed become so naturalised that a few scholars feel the need to categorically define what constitutes formal and informal water practices. Distinguishing between formal and informal practices is important as it directly impacts the levels of access to water. Thus,

formal water practices include systems with some form of statutory or legal recognition and predominantly networked systems of supply by state or incorporated private entities (Misra, 2014). According to Khatri and Vairavamoorthy (2007), in informal settlements the common formal water practices are mainly typified by government communal shared water sources such as water tanks and standpipes with an irregular unpredictable low pressured supply. Innes et al. (2007) argue, unlike formal means of water services that are regulated informal water practices are unregulated, and they can also be illegal. Informal water practices are made up of illegal connections of water to existing municipal infrastructure, buying or stealing water from neighbours who have formal taps or buying water from informal vendors and water collection from streams. Cheng (2014) claims that within these informal practices there are those that lie outside the territory of micro-networks. These mainly include practices such as illegal connections and water theft. The second group consists of micro-networks of water suppliers such as private water vendors.

Additionally, Kooy (2013) argues that the mainstream development community perceives informal water practices as being temporary measures that will somehow eventually fade away. SAHRC (2014) argues against the issue of the informal practices being temporary and eventually fading away. As per SAHRC (2014), a significant proportion of urban informal settlement residents already rely on these informal, unofficial, and often illegal sources. The institution, therefore, sees these practices not fading away instead their use is growing. As a result, reasons for the constant growth in the use of these informal water practices in African urban areas are identical to those explained in Bakker's (2008) study based in Cochabamba. In her findings, she discovered that the lack of new water sources, the disinterest of the political elites in extending the water supply system to the poor, inefficient management and a culture of political exclusion of settlements with complex localities all played a role in the reliance on illegal informal water practices. As argued by Ramírez and Sañudo-Fontaneda (2018), similar conditions persist in South African informal settlements. According to the scholars, the majority of South African informal settlement dwellers are still dependent on water from informal practices such as open streams, informal vendor water and illegal connections (Ramírez & Sañudo-Fontaneda,

2018). SERI (2018) argues that in settlements where the government has managed to install formalised infrastructure, such as shared communal standpipes and water tanks, these are usually too few to cover the whole settlement causing long queues. These are some of the main conditions that force informal settlement dwellers to also use informal water practices as additional means to the formal practices.

Furthermore, Burt and Ray (2014) highlight that both the formal and informal practices provide irregular and inconsistent rather than continuous water supply in informal settlements. It is further worth emphasising that these inconsistencies are not experienced equally nor can they be considered synonymous with either informal or formal water practices. According to Ahlers et al. (2014), with informal practices the inconsistencies are created by the daily negotiations over water, the request for a favour or gift, a temporary connection, buying a small amount, agreeing on a delay in payment of the bill and organising labour to fetch or fix the water source. With the formal practices the inconsistencies are caused by organising labour to fetch water from government standpipes and water tanks, broken infrastructure, and water cuts (Ahlers et al., 2014). These inconsistencies forced informal settlement occupants to use multiple sources or a mixture of informal and formal water practices to avoid running out of water.

Furthermore, Banks et al. (2019) claim that those who hold political power in urban areas can use their power to create an environment that benefits the poor or an environment that is detrimental to the poor in both the formal and informal water services approaches. Through the application or suspension of its legal and planning mechanisms, the government may decide to selectively give temporal legitimate powers to certain informal water practices and providers. This is mostly applied when the government wants to delegitimise unwanted service modalities and temporarily tolerate acceptable ones such as informal vendors (Ahlers et al., 2014). As such, this works best for the government since people will be charged for water and the government will not suffer the costs. Moreover, under such arrangements the government does not have to worry about the cost of implementing new formal infrastructure and dealing with the consequences of being blamed for the legitimisation of illegally built settlements thus, risk being perceived

as encouraging informal settlement formation. However, Swyngedouw (2006) argues that this does not work in the favour of the urban poor as it often widens the gap of inequality since such legitimate powers often benefit the government more than the users. This argument is further supported by Bakker (2008) who claims that under such circumstances governments can manoeuvre without the threat of legal reprisals, while the poor users often get stuck in unwanted and unhealthy situations for decades.

Moreover, illegal water connections can also be used by poor communities to convey a message. Nganyanyukaa et al. (2014) claim that in some instances the poor use informal arrangements, such as illegal water connections, as their way to convey a message to the political powers, since informal settlement dwellers are often excluded from the political system and urban environment at large. Burt and Ray (2014) argue that some informal settlement dwellers use illegal connections as a form of protest against water flow-restricting technologies at the communal standpipes. As witnessed in many informal settlements people stand in long queues to fill buckets of water, and these conditions worsen if the standpipe is trickled with water pressure limiting devices (McDonald & Pape, 2002). Hence, illegally connecting water to individual dwellings forces the government to remove the water flow-restricting technologies from the communal standpipes.

Just as in the case of water, informal settlements further use a mixture of formal and informal forms of sanitation practices. When referring to sanitation the first thing that comes to many people's minds is the physical latrine structure. Consequently, many African governments believe that when they have installed a communal sanitation structure in informal settlements, they have supplied sanitation services to the group of people in those settlements. However, Lucci et al. (2016) argue that if that structure is not maintained and cleaned, has no handwashing facilities, then sanitation access does not exist in that area. Unlike water services where delivery is defined by the availability of a regular functioning tap that is close to users, sanitation refers to a wide-ranging concept that covers general cleanliness ranging from hygiene, safe removal, collection, storage, transportation and disposal of both solid and liquid waste (Kasala et al., 2016). If one of these factors is missing it is fair to argue that access to sanitation is lacking.

The United Cities and Local Governments (2013) define formal sanitation practices used in informal settlements as sanitation facilities mostly shared by the whole community. These facilities range from pour-flush to piped sewerage systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab and composting toilets (United Cities and Local Governments, 2013). Nuhu and Mpambije (2016) define informal sanitation arrangements to include mainly the bucket system, open defecation and informal vendor sanitation facilities.

According to SERI (2018), in settlements where there are more permanent formal practices such as shared communal waterborne flush toilets, the toilets are mostly located on the parameters of the settlement, which is far from the users. The highest sanitation service backlogs are in informal areas, where there is uncertainty about the development trajectory of particular settlements or where service improvements are withheld to deter further unauthorised settlements (Palmer et al., 2016). In such settlements the South African government tends to install the so-called formal temporary sanitation arrangements, such as chemical toilets. As stated by Pan et al. (2014), temporary formal sanitation practices are useful for a short period. As per the scholars, the challenge with temporary measures comes once commitments have been made to an unsustainable form of infrastructure, the government never goes back to the area to upgrade the infrastructure to permanent. This leaves informal settlement dwellers under dire conditions for decades (Pan et al., 2014).

Temporary measures lack a long-term vision for sustainable and equitable sanitation services and they are very expensive to maintain. According to SAHRC (2014), the cost of removing human waste from sanitation arrangements such as VIPs in informal settlements is quite high. SERI (2018) argues that in most instances, municipalities outsource the functions of removing the human waste to private service providers, and fail to hold such providers accountable when they do honour the agreement. Thus, temporary sanitation practices are not feasible for long-term use.

By highlighting the issues associated with the formal and informal water and sanitation practices used in informal settlements, it is safe to conclude that all the types of water and sanitation practices used in such settlements present challenges in terms of access. All the formal and informal practices do not meet the water and sanitation needs of informal settlement occupants.

2.3 The institutional dynamics of water and sanitation services in the informal city

The main types of power institutions that exist in informal settlements are government institutions, civil society organisations and community leadership institutions. All these institutions play a role in service delivery, including water and sanitation, in informal settlements. Access to water and sanitation are basic human rights which are recognised at international level. However, informal settlements in Africa are still the most neglected areas without access to such services.

Literature shows that there are different approaches used by governments to deal with water and sanitation services in informal settlements. The first approach is the use of poor water and sanitation supply in informal settlements to discourage the growth of the settlements. Dagdeviren and Robertson (2011) argue that many African governments use punitive measures of poor provision of water and sanitation supply in informal settlements with the hope of discouraging the growth and development of the settlements. This argument is further supported by Mutisya and Yarime (2011) who claim that governments deprive informal settlement dwellers of water and sanitation to make their lives miserable, to combat the growth of the settlements. According to Mahabir et al. (2016), this approach stems from the belief that if informal settlements are supplied with water and sanitation services the supply of the services will attract more rural poor to migrate into urban areas, thus, leading to the growth of informal settlements. Nairobi in Kenya is a good example of this argument. Sana and Okombo (2012) argue that the Kenyan government's response to informal settlements has been neglect and exclusion from the government's policy planning, with the hope that people will be discouraged to move into such settlements. As a result, informal settlements in Nairobi are in a terrible condition and without any access to water and sanitation services. Mahabir et al. (2016) claim that the

problem with this approach is that very few of the poor population migrate to urban areas specifically for water and sanitation services. Hence, Turok (2014) argues that excluding and depriving informal settlement dwellers of water and sanitation access has not fixed or dealt with the complexities associated with the growth of informal settlements on urban water and sanitation infrastructure. This approach has proven to have long term damaging implications. As argued by Hawkins et al. (2013) that governments are currently struggling to cater for the diverse demands of infrastructural provision to meet economic and social needs for mainly residents residing in informal settlements. Given that informal settlements are heterogeneous, each settlement requires unique forms of water and sanitation basic infrastructures. Thus, the punitive measures of inequitable urban governance and depriving informal settlement dwellers of water and sanitation provision worsen these challenges and put more strain on already existing infrastructure, causing infrastructure breakdown (Tacoli et al., 2015).

Government institutions are further criticised of supplying mainly affluent areas with water and sanitation while neglecting informal settlements, since they are unable to recover costs from informal settlements. Mitlin and Walnycki (2020) argue that a key dilemma for governments is how to extend water and sanitation systems and improve the supply in informal settlements while recovering costs. Seeing that many of the informal settlement dwellers are often unemployed and poor they cannot afford to pay the usually high user fees and taxes for water and sanitation services. Moreover, given the high costs associated with sanitation provision in settlements with diverse sanitation needs the inability to recover costs has resulted in such settlements being poorly served by privatised services and lower-value waste (Jones et al., 2014). Furthermore, where these services have been contracted out this approach has often had adverse effects in informal settlements (Nunan & Satterthwaite, 2010). As argued by Dagdeviren and Robertson (2009) that in some areas, unless it is specified on paper, private utilities are not obligated to extend water and sanitation provision to residents who reside in informal settlements. SERI (2018) claims that in South Africa there have been failures from the contracted private utilities when it comes to maintaining and extracting human waste from the sanitation facilities in informal settlements. McDonald (2002) argues that from the

injustices of the apartheid regime to unfair tariff structures, cost-recovery for access to basic services has largely been counter-productive to the goals of equity and environmental sustainability in South Africa. It threatens and undermines the reconstruction and development efforts made after overthrowing the apartheid regime in South Africa. Cost-recovery has resulted in investments and scarce resources for water and sanitation infrastructural development to be skewed towards high-end projects that serve only the elite and high-income earners where costs will be recovered and not informal settlements (Awumbila, 2017; Nordic Africa Institute 2017; Tacoli et al., 2015). Additionally, Hall and Lobina (2008) claim that while informal settlements present diverse and costly water and sanitation needs, the notion of cost recovery has highly commodified water and sanitation services delivery, and this undermines the notion of water and sanitation as a human right. Thompson Jr (2011) supports this notion, the scholar claims that cost recovery has resulted in a situation where governments have shifted from prioritising water and sanitation supply to all citizens, including those that reside in informal settlements, to prioritising cost recovery (Thompson Jr, 2011). According to Mitlina and Walnycki (2020), the water pricing strategies used in informal settlement communities present challenges of affordability, which further undermine the attempts of ensuring universal access to such services. There is still a high number of people who still lack proper access to water and sanitation services due to their inability to pay for the services (Bond, 2006).

Connected with the challenge of cost recovery and inability to pay, governments in poor and developing countries do not have the financial capacity to provide water and sanitation services for the new poor population in informal settlements. McGranahan (2015) claims that the increase in demand for water and sanitation services, caused by informal settlements, generates constant pressure on many poor African countries to expand water reticulation and sewerage systems. International Water and Sanitation Centre & Water and Sanitation for the Urban Poor (2012) claims that municipalities have their tasks set on paper, yet, in reality they lack the technical and financial capacities to carry out water and sanitation projects in urban informal settlements. As further stated by Dagdeviren and Robertson (2011), the conditions of informal settlements determine the

nature of the water and sanitation infrastructure. These conditions create difficulties for municipalities to meet the unique infrastructural needs of each of the settlements, since many of them operate outside of traditional municipal planning policies (Dagdeviren & Robertson 2011). The challenge is that where infrastructure expansion for these settlements is authorised and financed the practical and technical difficulty of development is major, as such this requires high costs.

While the economic cost for the provision of both water and sanitation is high in informal settlements, there are other factors associated with sanitation services that create more complexities for the provision of sanitation. As a result, this has further caused unequal prioritisation between water and sanitation services. Toubkiss (2008) argues, while water access has been recognised as a major concern by governments, sanitation services have remained largely ignored. Water services seems to be prioritised over sanitation, due to the high costs associated with building sanitation infrastructure and the numerous technical, bureaucratic and legal constraints that are connected to sanitation development, as compared to water (Toubkiss, 2008). This view is further shared by Hawkins et al. (2013) that the technical, bureaucratic and legal sanitation issues, especially in informal settlements, require the coordination of many diverse stakeholders which can be a costly process. Thus, to avoid these issues, governments are criticised of shifting the focus and prioritise water over sanitation services. Nuhu and Mpambije, (2016) claim that the poor prioritisation of sanitation is often reflected by the lack of financial resources allocated to sanitation relative to financial resources allocated to water services. While Isunju et al. (2011) argue that in many instances, even funds that are to be invested for sanitation services are diverted to other programmes in municipalities.

As a result, sanitation is usually underfunded and marginalised in programming despite its important links to improved health, safety, development, and well-being for the urban poor residing in informal settlement communities (Corburn & Hildebrand, 2015). In South Africa, this has been one of the key causes of the very low sanitation coverage when compared to water coverage, even in South Africa's best-resourced urban centres.

Sanitation is consistently given lower priority when resources are allocated (SAHRC, 2014).

Furthermore, other challenges related to the poor prioritisation of sanitation are linked to a range of institutional factors and governance failures. As reported by Toubkiss (2008) from an institutional point of view, roles and responsibilities for sanitation policies and their implementation are divided accordingly between the various departments. These include departments responsible for water, health, education, infrastructure and urban development. Thus, sanitation policies often get muddled up in these departments and given little or no attention. This seems to be another key challenge that has affected sanitation services provision in South African informal settlements. According to SERI (2018), one major challenge that has affected sanitation delivery in South African informal settlements was the decision made by the government to link sanitation services to its housing subsidy programme. This meant that sanitation services were the responsibility of the department of housing, as such sanitation was mainly provided with government subsidy houses (SAHRC, 2014). These conditions had daunting implications for informal settlement dwellers. The alignment of sanitation services with government subsidy houses meant that informal settlement dwellers were not catered for. This caused a decline in sanitation provision in such settlements. Additionally, SAHRC (2014) argues that the alignment of sanitation services to the government housing subsidy was one of the major causes of the unenclosed toilets saga in Cape Town and the Free State in 2011, which were the result of a drop off in systemic and effective monitoring when sanitation was placed under the Department of Human Settlements.

While informal settlements are poorly represented by political figures and continuously face poor water and sanitation provision from the government, political representatives are further criticised of using water and sanitation access in exchange for votes. According to Jones et al. (2014), governments and political representatives use the provision of basic services including water and sanitation for political support in informal settlements. This practice is referred to as clientelism in literature (Deuskar, 2019; Kumar, 2018; Mitlin, 2014; Rains & Wibbels, 2020). This argument is further supported by Banks'

(2006) findings in a research study the scholar conducted in Dakar, where politicians used community leaders in informal settlements to mobilise a vote bank in exchange for improved basic services and other benefits in informal settlements. Kumar (2018) argues that in other instances, the political representatives find someone from within the settlement whom they use as their intermediary. The intermediary's job is to collect information, protect the image of the political representative and they further ensure the representative has political support within the settlement. This is done in exchange for basic services delivery for the settlement and other incentives in the form of money and jobs for the intermediary.

According to Deuskar (2019), while such practices provide informal settlement dwellers with some level of access to the state, the benefits are often inadequate. Given that the politically elected representatives decide how basic services should be allocated to informal settlements, they hold more power over the informal settlement dwellers, as the receivers of the services (Deuskar, 2019; Jones et al., 2014; Kumar, 2018). As a result, Mitlin (2014) argues that informal settlement dwellers find themselves at the mercy of the government or the political representatives for a prolonged period, since the settlements require improved water and sanitation services daily, and the political representatives put in extra effort to please informal settlement dwellers mainly during elections or close to election time.

Similar conditions persist in South Africa as discussed by (Bénit-Gbaffou, 2006; Mananga, 2012) that political representatives tend to visit informal settlements and make promises of improved access to basic services during their political manifestos, as a way of gaining votes and fail to deliver after they have been voted into power. Jones et al. (2014) further support this view, in poor and developing countries politicians often compromise improved access to water in informal settlements to use it as leverage during the election period. According to the scholars, the politicians promise informal settlement dwellers improved access in exchange for personal or political gain (Jones et al., 2014). As such in South Africa the results of the unfulfilled promises have been the violent service delivery protest demonstrations, which have become a habit in many informal

settlement communities (Mananga, 2012). Hence, Turnbull (2008) claims that political campaign promises should not be taken as contractual obligations. These are used to lure voters' support and to get voters charged up with exciting plans for positive change, which rarely occurs after the political representatives are voted into power (Turnbull, 2008). This is why, Kumar (2018) argues that in these situations monopoly power empowers politicians to exploit the vulnerability of the informal settlement dwellers with discriminatory and optional favours, such as access to water and sanitation.

Thus, Huchzermeyer (2011) argues that exploitation and clientelism are part of the continuous existence of informal settlements in most African urban centres, despite the hostile conditions, evictions and even the large-scale displacement. Kumar (2018) expands this argument by stating that the practice of clientelism shows that informal settlements persist because they satisfy certain functions for social, economic, and political actors, regardless of their informal, haphazard and illegal nature.

While governments carry the responsibility of ensuring that the human rights to water and sanitation are achieved however, the literature discussions show that water and sanitation services in informal settlements have governance and operational challenges that the public sector has been unable and reluctant to deal with adequately. This is mainly highlighted by the different unsuccessful approaches taken by governments regarding water and sanitation provision to informal settlements.

The poor presence of governments and their poor responses to the water and sanitation needs of informal settlements, in African countries, has led to the growth of Civil Society Organisations (CSOs) as the providers of the services, inexpensively and timely to poor households in such settlements. Chitiga-Mabugu, et al. (2014) claim that CSOs are made up of a multitude of associations, which society voluntarily organises itself, and these organisations represent a wide range of interests and ties. CSOs are not elected into existence but are voluntarily formed by people who have the same vision of improving living conditions for the less fortunate.

Kaldor (2003) argues that CSOs are effective in ensuring that governments take responsibility and are held accountable in ensuring that the marginalised population have enough access to basic services. As a result, Ghaus-Pasha (2004) claims that CSOs are increasingly viewed as providers of relief and promoters of human rights. Furthermore, Ibrahim and Hulme (2010) specify that the three areas in which CSOs operate to inflict change in informal settlements are: advocacy which involves pushing for structural social change, policy engagement which involves petitioning for pro-poor policies and service delivery which involves assisting poor communities with the provision of basic services.

According to (Ntshwanti, 2009; Pollard and Court, 2005), CSOs that promote basic services provision, including water and sanitation provision, hold the power to fight social exclusion and inequalities, thus, ensuring that the poor have access to enough water and sanitation services. Banks and Hulme (2012) further argue that CSOs use their resources to help the marginalised population to mobilise and raise their voices, for government to better respond to their needs. In fragile states, where government institutions are extremely weak or even non-existent, CSOs also hold the power of being custodians over donor funds that are meant for services delivery to the excluded groups, who have no access to basic water and sanitation services (Banks & Hulme, 2012; Department for International Development, 2013).

The importance of CSOs in water and sanitation services delivery is highlighted by Clark et al. (2016) who perceive CSOs as organisations that assist government institutions in ensuring that services are delivered to the poor. In some instances, CSOs implement water and sanitation service delivery projects that are sponsored by the state and third party funding institutions (Clark et al., 2016). AusAID (2012) argues that CSOs keep playing an important role in facilitating better water and sanitation access for the poor population. The organisations are described as being dynamic and able to adapt to conditions on the ground, they can reach areas that are located in the outskirts and build good relationships with communities (AusAID, 2012).

Though CSOs play an important role in ensuring that informal settlement dwellers have access to water and sanitation services, issues related to poor accountability and lack of transparency have been reported as leading challenges in some of the CSOs. This hinders the progress of these organisations. According to Haque and Ali (2004), for CSOs to better achieve their aims and goals, the CSOs should undertake governance in such a way that transparency and accountability are key. Transparency and accountability form part of good governance and they go hand in hand. As per Fox (2000), transparency means that the organisations and their staff members should be transparent to beneficiaries and other stakeholders on the work they do, how they plan to achieve the relevant outcomes and their performance towards achieving the outcomes.

Furthermore, transparency requires the organisations to allow beneficiaries to provide their inputs regarding the plans and programmes that will be implemented, as the outcomes of the programmes will mainly affect the beneficiaries. Moreover, Guénéheux and Bottomley (2014) claim that accountability has to do with the CSO's willingness and its ability to answer and take responsibility for its actions, activities and messages. Additionally, (Guénéheux and Bottomley, 2014; Kakumba and Fourie, 2007) identify different levels in which CSOs should account these are; upward to donors and regulators, downward to beneficiaries, outward to peers, members and partners, inward to staff, board and volunteers and hierarchal accountability, which is based on the internal controls through supervision of individual employees in handling and using organisational resources, by those holding senior positions in the organisation. Each of these levels require different mechanisms which are based on the different stakeholders to whom a CSO must account. Jordan (2005) notes that the mechanisms should include the organisation's operational capacity, management structure, performance measurements, accounting practices with an emphasis on legal obligations and participatory assessments.

However, as argued by the Commonwealth (2013) that experience has shown that the way accountability has been practised and the poor accountability mechanisms in some CSOs has been the main cause of various issues of unethical practices. CSOs have

adopted a self-regulation technique to govern their affairs. As such, certain CSOs practice principles of accountability proportional to their capacities and budgets (Commonwealth, 2013). This has resulted in several unethical behaviours and abuse of powers, such as maladministration and mismanagement of funds, since the accountability practices implemented do not meet the required standards in some of the CSOs (Commonwealth, 2013; Haque & Ali, 2004; Mallya, 2009; Shivji, 2004). Hence, scholars such as Ibrahim and Hulme (2010) argue that the lack of accountability mechanisms and the poor accountability practices, in some CSOs, have led to the growing distance of some of these organisations away from poor communities, while concentrating more on their relations with donors.

Kaldor (2003) expresses that there are many incidences where some of these organisations have used their voice to convey misleading information and make decisions on behalf of communities, without the communities' consent. The organisations would claim that they are representing poor communities to gain political and financial support from outside donors (Kaldor, 2003). Trivunovic et al. (2011) further support this claim by arguing that there are certain CSOs which have used the names of the beneficiaries to obtain funds and resources for personal and individual benefits. Due to such unethical practices, Mitlin (2001) argues that over the years there have been ongoing questions regarding the credibility of some of the CSOs. Questions are asked about where CSOs get their mandate and funding from, who they represent, how they make their decisions and what impact they are having on society (Gibelman & Gelman, 2004).

As a result, Ebrahim (2003) stipulates that without transparency and strong accountability mechanisms some CSOs can exaggerate their claims to legitimacy, which may be based more on a belief in value-driven organisations than on actual monitoring and assessment of their accomplishments. Thus, transparency and strong accountability mechanisms are important, as they protect against authoritarian decisions, the misallocation of resources, and corruption. Claeyé and van Zyl (2019) further claim that accountability and transparency help to identify problems such as mismanagement, fraud and corruption in CSOs. The literature debates therefore demonstrate how the lack of accountability and

transparency, as important governance features, in some CSOs threaten deep-rooted social transformation and development, thereby hindering processes of structural and political change (Datzberger & Nguyen, 2018).

As the formally created government and some CSO institutions fail to assist informal settlement dwellers with service delivery, informal settlements create their informal leadership structures. The community leadership structures are meant to drive development and service delivery in their designated communities. As argued by Koster and de Vries (2012), community leadership structures in informal settlements are formed by informal settlement dwellers, given that the settlements are socially and politically excluded from the broader urban environment. Barker (2009) supports this view by claiming that community leadership structures serve an important purpose given that informal settlements have been largely ignored by those who wield state power due to their illegal and informal status. As such, Makwarela and Ebrahim (n.d) perceive community leadership structures as informal structures created to serve the interests of the informal communities in the absence of formally created structures, as these structures serve as the voice of the communities.

Furthermore, Misselhorn (2008) claims that the main duties and responsibilities of such structures are issues regarding occupancy arrangements within the settlements, they are regarded as the authority from whom permission needs to be obtained when one wants to occupy space in a particular settlement. Hendler and Fieuw (2018) argue that the structures are further responsible for convening general meetings, identifying stakeholders that would like to work with the settlement, acting as mediators and at times resolving conflicts that may arise in the settlement. As further argued by Makwarela and Ebrahim (n.d) these structures assist informal settlement communities by promoting community participation, through listening to the needs of the community and taking them forward to the relevant stakeholders, to improve the settlement's living conditions and access to basic services. UN-Habitat (2016) claims to drive efforts of improving access to services delivery in informal settlements it is important to enable the active participation of community leadership structures in services delivery decision making at the municipal

level. Thus, the CoCT (n.d) describes such structures as the most important when the state and key stakeholders want to interact with informal settlements, since they represent informal settlement communities.

Given that community leadership structures are informally created, one cannot apply for a position to serve in the structure nor are they formally elected to serve in the structure (Koster, 2009). The selection criteria of individuals who serve in these structures differ in each settlement. According to Koster and de Vries (2012), the appointment of leaders mainly depends on the complex sets of social relations and cultural representations that constitute life in each informal settlement. As a result, Srivastava (2013) claims that the selection standards and the informal nature of the structures result in a selection of a range of leaders, who come to represent a variety of aspirations and needs. Thus, the leadership style of the people serving in such structures differs in each settlement.

Furthermore, as much as there is a general recognition of the important role played by community leadership structures in informal settlements, Barker (2009) argues that some of these structures and leaders are the source of hardships faced by informal settlements. According to Srivastava (2013), in some settlements, community leadership representatives play with the emotions of the informal settlement dwellers and take advantage of the poor conditions that informal settlement dwellers find themselves in. Under such conditions, instead of making decisions to benefit the community, the representatives use the community's pain to gain resources for their gain (Srivastava, 2013). This does not coincide with how informal settlement dwellers in Koster's (2009) study defined a good community leader in informal settlements in Brazil. In the scholar's study an ideal community leader is defined as "a leader that does his work out of love for the community, and for its people. He should do this in an unconditional way, without attempting to benefit from it himself" (Koster, 2009, p. 52). Thus, community representative leaders have to find a balance between self-interest and the interest of the community (Koster, 2009).

Additionally, Banks (2006) stipulates that in some settlements community leaders serving in these structures are also the source of fear, they use a more dictatorship form of leadership. In such settlements, much of the legitimacy of the community leaders is reliant upon the fear of informal settlement dwellers (Banks, 2006). Thus, Koster and de Vries (2012) claim that these discriminatory practices and abuse of power raise issues of accountability because in the eyes of their fellow informal settlement dwellers the leaders are meant to work for the settlement at large, and not for themselves. Yet, as much as such structures owe their existence to the relevant community and should be accountable to that specific informal settlement community, it is difficult to hold these leaders accountable without any proper formal accountability regulatory framework (Koster & de Vries, 2012; Paller, 2012).

Therefore, this shows that as much as community leadership institutions play an important role in informal settlements, including assisting the settlements with acquiring services, their informal nature can further serve as hindrances in acquiring water and sanitation for the whole settlement. The hindrances result from the lack of regulatory framework which can lead to misconduct, especially given that the leaders are informally selected and each individual has different leadership traits and personal interests.

2.4 Gender and access to water and sanitation in the informal city

Migration patterns reveal that the number of women migrating to urban areas in the African region has generally been growing in recent decades. As argued by Tacoli (2012) that as women migrate to urban centres in increasing numbers the proportion of women-headed households increase in these areas. Yet, urban areas are planned more on meeting the needs of men, and this has serious implications on how women experience water and sanitation access in urban areas (Institute for Women's Policy Research, 2015). Women have different water and sanitation priorities and needs as compared to men (Institute for Women's Policy Research, 2015).

Although globally women are being recognised as vital actors in water and sanitation supply management, urban poor women are commonly excluded from decision making,

formulating, planning and implementing water and sanitation management measures (UN, 2017). Men and women in power-related positions such as decision making, policy-making and implementation, still question the relevance of gender in water and sanitation (UN, 2017). They choose not to recognise the differences and demands between men and women's access and control over water and sanitation resources and capacities. While women are responsible for water and sanitation-related tasks, they are hardly allowed to participate in water and sanitation-related projects within informal settlement communities (Tacoli, 2012). According to Crow and Sultana (2002), women are perceived as only having a domestic role within their relevant households, the knowledge they possess about water and sanitation is often undermined. Consequently, their voices are silenced by those who hold power at the institutional level, regarding urban water and sanitation access in informal settlements.

Moreover, Chant (2014) argues that the disparity between the input from women and men and their perceived responsibilities, especially with water and sanitation, in informal settlements seems to be growing. There are unequal gender power dynamics that affect women's water and sanitation access at the household and community levels within such settlements. These unequal gender power dynamics are mainly embedded in the patriarchal system and are socially constructed. According to Sultana (2012), the patriarch is the man decision-maker who controls who performs what duties and chores at the household and community levels. Thus, patriarchs dominate, control and they are the authority figures and decision makers within their families and communities (Sultana, 2012). Scholars such as Willan et al. (2020) argue that in many South African communities harmful gendered norms are typical, where women endorse various femininities within a highly patriarchal system that is historically unequal. Even after 25 years of democracy these inequalities are still not redressed completely (Willan et al., 2020). In South Africa dominance and control over women by men, which further widens gender-based inequalities, are created socially within the patriarchal system with women often forced to embrace and accept the power men have over them (Closson et al., 2020; Willan et al., 2020). Furthermore, European Union (2015) argues that in African societies household chores such as cleaning, cooking and the collection of water are viewed mainly

as women's responsibilities. In a study conducted in informal settlements in Nairobi by the European Union (2015) a chief in one of the informal settlements was interviewed, regarding gender roles at the household level. His response was “when girls do household chores they are trained to be better wives. Girls are empowered on hygiene and boys are given enough time to play and to study.” (European Union, 2015, p. 33). This further shows that unequal gender power struggles are rooted at the household level at a very early stage.

Additionally, Geertz and Iyer (2018) argue that the biological differences between men and women influence what they need from water access and sanitation facilities and how often they use them. However, beyond these biological differences the social and cultural construction, of what it means to be men and women, shape how women access water and sanitation. These gender social and cultural constructs widen gender-based inequalities and affect decision making powers at the household and community levels, regarding access to water and sanitation. Women devote a good deal of their time and their physical effort to supplying their families with water, and express a genuine demand for improvement in sanitation supply for their homes and communities. Andajani-Sutjahjo et al. (2015) argue that women in informal settlements in the African region collect 70% of household water, while men collect 30%. “At the communal sources, women may also have to compete with one another, increasing the stress and conflict associated with routine chores” (Chant, 2013, p.19). Yet, when it comes to using the water it is often the men who dictate how it should be used.

The use of the bucket and open defecation for sanitation purposes by women when they are having their monthly menstrual periods further increase the social pressure which women face, due to the negative cultural perceptions and taboos related to menstruation, in households and communities. According to Tacoli (2012), menstruation is commonly associated with pollution, and many societies in Africa see it as a reason for excluding and segregating women from family and community life for a certain period. Sweetman and Medland (2017) further claim that in some communities women are expected to remain within their homes or in a special room and there are taboos on handling and preparing food during this period. Geertz and Iyer (2018) agree with this argument, the

scholars claim that women may face restrictions on their activities and sanitation access because of social norms and taboos related to menstruation and female sexuality. Men at the household level restrict women from using the bucket for sanitation purposes because of social norms and taboos related to menstruation (Geertz & Iyer, 2018). These further increase women's workloads and have daunting consequences on their dignity and self-respect.

As a result, WaterAid (n.d) claims that to avoid using informal sanitation practices, such as buckets and open defecation, women in informal settlements often restrict their eating or drinking to delay the need to use a toilet. This results in various health problems and affects the women's quality of life. Thus, unequal gender power dynamics, roles, and relations influence and inform how water and sanitation services are used and maintained within households and communities.

Together with other forms of urban violence, such as domestic violence, the types of water and sanitation practices used in urban informal settlements further exacerbate gender-based violence in such settlements. The long distance to where the water and sanitation facilities are placed is reported among factors which put women's lives at risk in informal settlements. According to Mcilwaine and Chant (2013) formally provided water and sanitation facilities, such as communal standpipes and shared communal toilets, are normally placed far away from the dwelling in the settlements. Given the high levels of criminal activity in many settlements, the distance to the facilities puts women at risk of being sexually assaulted and physically harmed on their way to or from the water and sanitation access points (Chant, 2013). Simone (n.d) supports this view by stating that long trips to fetch water from standpipes and communal water tanks and walks to community shared sanitation facilities can often be rough for women, especially at night or in the early hours of the morning when it is still dark. Formally provided water and sanitation facilities in informal settlements are often placed at inconvenient locations, further putting women's lives at risk. As argued by Corburn and Hildebrand (2015) that water and sanitation facilities in informal settlements are situated in unsafe public locations where women can be observed by anyone and where their movements can be

monitored. This increases the chances of the women being followed to the facilities and physically harmed.

In addition, the conditions of the shared sanitation facilities are often poor and not gender-sensitive. According to Sommer et al. (2014), the community shared sanitation facilities have doors that face footpaths or streets and some do not have doors exposing women to more harm and assaults. The assaults are even worse in the evening due to the lack of streetlights and lack of electric connections within the communal sanitation facilities (Sommer et al., 2014). Hence, Corburn and Hildebrand (2015) claim that women in informal settlements often report that they use sanitation facilities during the day rather than the evening and they opt to use informal sanitation mechanisms such as buckets in their dwellings during the evening.

The use of informal practices, such as open defecation, further worsens the chances of sexual assault and women being murdered. Women can become targets of sexual predators while they relieve themselves in bushes. They can be followed and assaulted and murdered without anyone close to help them (Koner, 2018). Kwiringira et al. (2014) argue that for women in informal settlements going to relieve themselves is usually a daunting task that is far beyond getting rid of human waste, as they also have to consider the life-threatening conditions associated with relieving themselves, in such areas. Corburn and Hildebrand (2015) argue while men can relieve themselves easier in public and not face major backlash, if they are seen doing so, the picture is very different for women, as they are either insulted or physically assaulted. As such, the majority of the types of water and sanitation arrangements used in informal settlements have turned women into victims of violence.

According to Amnesty International (2010), these unsafe conditions and vulnerabilities that women encounter every day when making their water and sanitation choices are some of the most important gender inequalities experienced in informal settlements. Moreover, Amnesty International (2010) claims that such vulnerabilities are more than the uncertainties women face when they practice open defecation or use unsafe communal

water and sanitation facilities, they further include the inability to tell anyone if they are violated because of the shame that would bring to an individual and their household. This presents particular psychological challenges for women who have their privacy, dignity, self-respect and respect in the communities undermined. As a result, Koner (2018) argues that the forms of water and sanitation arrangements used in informal settlements should be considered as a matter of violence against women because they push women towards the risk of being violated or sexually abused.

The water and sanitation access in informal settlements further affect women's health, by exposing them to harsh and unhealthy environments. The water related health and hygiene challenges faced by women in informal settlements are mainly caused by the use of formal and informal water arrangements that are polluted. Many informal settlements do not have specific dumping sites, and in those that do have dumping sites municipalities do not render garbage collection. As such, informal settlements in general are surrounded by the rubbish that finds its way to nearby streams. Sweetman and Medland (2017) argue, given that in many instances, informal water practices such as water streams are the only water sources used by informal settlement communities, the water gets polluted, and gives rise to waterborne diseases. Emeasoba et al. (2017) support this view by arguing that in urban areas heavy metals are often released into the environment, they accumulate in the soil and form deposits in open rivers and streams. These are accompanied by uncontrolled dumping of human waste, open defecation, visible and open sewers that pollute water, and gives rise to waterborne diseases such as cholera (Nuhu & Mpambije, 2016).

Other water sources Burt and Ray (2014) report as major contributors to waterborne diseases endured by women in informal settlements are water practices, such as water tanks. Communal water tanks that are formally provided by governments are placed in certain sections of the settlements for years, and they are never cleaned. This is similar to water tanks informally provided by informal vendors to transport and sell water, the tanks are never cleaned. Failing to clean the water tanks result in the formation of bacteria in the water, causing sicknesses. Burt and Ray (2014) argue that governments' failure of

providing regular maintenance of such infrastructures is linked to the uncaring and exclusion of informal settlements in the broader urban environment, by these institutions of power. According to (McGranahan and Satterthwaite, 2006; Swyngedouw, 2006), with informal vendors poor maintenance results from the fact that these service providers value making a profit over the quality of the water they sell.

In the case of sanitation health and hygiene, UN (2006) argues that the use of communal shared sanitation facilities that are not gender-sensitive and the use of shared household buckets are responsible for the transmission of diseases and infections in informal settlements. The most common diseases and infections transmitted by the sanitation arrangements are diarrhoea, cholera, typhoid and several parasitic infections. Sanitation hygiene is commonly known as sanitation cleanliness, conditions and practices that serve to promote or preserve human and environmental health. However, poor maintenance of sanitation facilities in informal settlements makes it difficult to uphold health and hygiene standards for women. Given that communal toilets in informal settlements are mainly shared by high volumes of people they become dirty often, and require to be frequently cleaned especially in settlements where the facilities are not divided according to gender (Hawkins et al., 2013). Yet, government-provided communal sanitation facilities in informal settlements are either not cleaned often or not cleaned at all. SERI (2018) argues that chemical toilets used in informal settlements are supposed to be emptied regularly however, their findings show that these facilities are emptied a few times during the week resulting in them being full over the weekend and public holidays.

In settlements where toilets are cleaned women feel that the chemicals used have negative implications on their health. In a study conducted by SAHRC (2014) women respondents argued that there is a need for more information to be provided regarding the impact of the chemicals used to clean sanitation facilities on their bodies. Furthermore, SERI (2018) argues that facilities that are provided are often not functional and either do not flush or are overloaded. Sewerage systems are further not maintained and raw sewerage spills onto the streets (SERI, 2018). These poor maintenance issues

have been reported to have daunting implications on informal settlement dwellers' health, with women being the most affected gender group.

According to Tacoli (2012), in the failure of the state and private entities in cleaning the facilities, the majority of the time the women carry the burden of ensuring that the communal sanitation facilities are clean and well managed. Duflo et al. (2012) further argue that cleaning the toilets result in certain health complications for women. These scholars claim that women tend to clean these toilets without taking any health-related protection measures, this opens them up to more chances of contracting diseases and infections (Duflo et al, 2012). As such, Tacoli (2012) argues that these conditions place more burden on the women, as they tend to be implicitly and sometimes explicitly blamed for failing to maintain high standards of cleanliness, while they are not supplied with safety measures to protect their health. Sahoo et al. (2015) further claim that sanitation access that gives focus only on issues of availability of facilities, urination and defecation are too narrow to reflect the reality of sanitation access in women's lives. Hence Joshi et al. (2011) further claim that education on sanitation and hygiene habits is a vital intervention that needs to be done at the community level directed to both men and women, since sanitation facilities are often not gender-sensitive and shared by both gender groups in informal settlements.

Additionally, women have biological factors which require hygiene essentials. According to Sweetman and Medland (2017), women in informal settlements specifically have to deal with menstrual hygiene, pregnancy and its aftermath and female menopause, which all create the need for gender-specific sanitation services. These women-specific bodily functions create hygiene, health and well-being problems that can affect women in different ways (Sweetman & Medland, 2017). Among these bodily functions, menstruation hygiene seems to be the leading factor in informal settlements, which mostly necessitates gender-specific sanitation services since it occurs monthly. However, formally provided communal shared sanitation facilities do not have sanitary disposal bins, resulting in most of the used sanitary products being disposed of in bushes and open areas where people commute daily (Joshi et al. 2011). Hence, Corburn and Hildebrand (2015) argue that there

is a need for gender-sensitive sanitation facilities with water sources placed close to the facilities in informal settlements to cater for the specific needs of women. Koner (2018) further stipulate that where sanitation services are lacking the use of informal sanitation practices such as buckets, which are emptied on open roads and walking paths and the practice of defecation in open spaces while women are in their menstrual periods also present health and hygiene-related challenges.

The poor maintenance of water and sanitation facilities further present irregular and inconsistent access. Given that the majority of the infrastructures used in informal settlements are shared communal facilities the facilities break often and easily, and in many settlements service providers fail to fix the infrastructure on time (SAHRC, 2014). According to (Hawkins et al., 2013; SAHRC, 2014), the poor maintenance of the frequent broken and blocked toilets, pipes and taps, and issues of accountability in fixing the infrastructure are the key causes of irregular and inconsistent access to water and sanitation. These conditions further widen gender-inequalities in terms of access to these services. Nnadozie (2011) claims that other water irregularities are caused by municipal regular water cuts, water limiting devices, illegal connections and water infrastructural theft. Thus, Burt and Ray (2014) argue that irregular and poor water access means that women have to collect, store and possibly treat their water. These options vary greatly in terms of investment cost, time requirements, storage capacity and water quality (Burt & Ray, 2014). As a result, Chant (2013) claims that women in informal settlements are often left with no choice but to find ways of collecting enough water, to ensure that even if the water supply runs out there is some water left to do the basic needs of the household.

Other irregularities with access to sanitation in informal settlements are further caused by other residents. Some of the residents buy padlocks and lock communal shared sanitation facilities. They enforce ownership over the facilities and refuse other residents the use and access to the facilities. Given that the perpetrators are often feared individuals in informal settlement communities, in many instances, the women cannot stand up against this form of abuse of power (SERI, 2018). All these factors put further strain on women, who are forced to find other means of water and sanitation access.

Further poor water and sanitation access presented by the practices used in informal settlements on women are linked to insufficient and fewer water and sanitation sources. According to SERI (2018), since formalised water and sanitation services are generally limited to a few community shared water sources and sanitation facilities, women waste their time standing in long queues waiting to fill buckets or use sanitation facilities. As further supported by Ramírez and Sañudo-Fontaneda (2018) the queues can be long at the standpipes causing women to spend the majority of the time that should be used for other activities queuing at the standpipes. This can be frustrating resulting in disputes and disrespect among the women who collect water from the standpipes.

Additionally, issues of unaffordability of water further serve as hindrances for women's access in informal settlements. Bakker (2008) argues that when informal vendors were introduced in the water sector the aim was to provide water services at a lower cost in areas which governments were unable to cover. Unlike the government which is not profit-driven, informal vendors operate as private businesses, which aim to make a profit. Without proper regulations governing such vendors, they overcharge, under-provide and ignore the benefits of water and sanitation services (McGranahan & Satterthwaite, 2006). According to Swyngedouw, (2006), the transfer of water control and delivery from the public to the private sector involves a change in the arrangements of power and control.

As further argued by Cheng (2014) that in informal settlements where informal water vendors are the main water source access to water is mediated by informal political negotiations between the water services provider and the users, which in most cases are women. These informal political negotiations often possess unequal power dynamics, which have far-reaching implications for shaping networks of access (Peloso & Morinville, 2014). As (Cheng, 2014; Swyngedouw, 2006) confirm that the vendor holds more power than citizens under these types of arrangements. Failure to effectively manage these power dynamics can create hostility between the vendor and the users. The power imbalances are mainly rooted in the levels of poverty that persist in informal settlements, and the limited choices regarding the type of water sources and types of sanitation

arrangements available in such settlements. Given that the majority of women residing in informal settlements are poor and unemployed, Kooy (2014) argues that if the informal services providers decide to increase the price of water and sanitation use women have little to non-bargaining power over the price, as in many cases these are the only source of water and sanitation services they have.

As further claimed by Bakker (2008), water that is sold by informal providers tends to be more expensive per unit volume than a formal piped water supply. This claim is further supported by Chant (2007) who claims that the costs of water supplied by such informal providers can be charged up to 8-10 times higher than public providers. As a result, given their lower incomes and unemployment statuses many informal households pay a much higher proportion of their income for water than wealthier households do.

> Wealthier women with a networked connection in their household receive water at a lower cost per unit volume, spending lower proportions of income for much greater quantities of water, this is a typical pattern in many urban areas in Africa (Bakker, 2008, p. 1896).

Aguilar and Lòpez, (2009) further argue that the poor informal settlement population in the urban periphery are the most vulnerable, especially in terms of water and sanitation services. Such settlements are placed in areas where it is difficult and impossible to install infrastructure. It is mainly within these settlements that informal vendors take advantage of the population's need for these services, and often make supply conditional on the payment of very high prices (Aguilar & Lòpez, 2009; Bakker, 2008; Kooy, 2014). As a result, Chant (2013) argues that women in settlements using these forms of informal water and sanitation arrangements often spend their last cent on water and sanitation services.

Therefore, the poor conditions associated with water and sanitation access prove that there is a need to address gender in water and sanitation services in informal settlements. This will create an enabling environment for women to participate in decision making in water and sanitation at the institutional and household levels and in water and sanitation

projects at the community level, especially in African informal settlements where unequal power dynamics presented by patriarchy and gender cultural norms play a huge role in decision making on the ground.

2.5 Conclusion

This chapter provided literature discussions around the infrastructural dynamics, institutional dynamics and gender pertaining to water and sanitation in the informal city. As highlighted in the infrastructural dynamics that land tenure issues, the nature of the land on which informal settlements are located and the growth of informal settlements seriously affect water and sanitation infrastructural development. This chapter further gave a discussion on the everyday water and sanitation practices, which are used in informal settlements. Regarding these practices, the chapter outlined the use of a mixture of formal and informal arrangements in such settlements.

Moreover, in terms of the institutional dynamics this chapter discussed how government institutions use poor water and sanitation access as a mechanism to combat the growth of the settlements. Further debates on how governments provide affluent areas where they will recover costs with water and sanitation and neglect informal settlements were given. Discussions on how governments fail to provide water and sanitation to informal settlements due to lack of capacity, including financial capacity were also given. The literature review further debated on the unequal prioritisation between water and sanitation provision in informal settlements, with sanitation being the service that is not prioritised. Other key debates that emerged in this chapter were around clientelism, where water and sanitation provision in informal settlements is used for push personal political interests at government level.

Furthermore, other institutional dynamics that the literature highlighted were around CSOs, and the role they play in water and sanitation service delivery. Regarding these organisations the literature review discussed how issues associated with transparency and accountability, in these organisations, further affect service delivery on the ground. The last institutions that the literature review covered were the informal community

leadership structures that are found in informal settlements. The literature debates highlighted the important role played by such institutions in the absence of formal institutions in informal settlements. Literature discussions further discussed how informal community leadership institutions can also be a source of pain in informal settlements, due to the informal nature of the structures.

Last, the literature review looked at gender in water and sanitation in the informal city. In this regard, the literature first highlighted the unequal gendered power dynamics that emerge from cultural norms and beliefs, which further affect women's water and sanitation access at the household and community levels. Second, the literature review discussed how gender is often excluded at the institutional level in the water and sanitation services sector. Furthermore, literature debates around important factors such as: safety, health and hygiene, irregular and inconsistent access, insufficient access, unaffordability and how they affect women's water and sanitation access were highlighted in this chapter.

CHAPTER 3
METHODOLOGY

3.1 Introduction

This chapter presents an outline of the research methodology used in answering the research questions of this study. This study aims to understand the specific configurations of the institutional and infrastructural arrangements that exacerbate or mitigate women's access to water and sanitation services in two informal settlements. In this instance, the methodology puts women as the key focus in terms of them being the study participants at the household and community levels in both study sites. Furthermore, the data collection instruments used to obtain the data included key questions relating to gender with a focus on women's specific water and sanitation needs. Structuring the methodology of this study in this manner assisted in informing the conclusion reached in the overall research regarding the ways in which the institutional and infrastructural arrangements have affected women's access to water and sanitation services.

Section 3.2 of this chapter highlights the importance of using a comparative case study design with ethnographic elements and the choice of selecting QQ Section and Marlboro South as suitable case studies for this research study. Section 3.3 maps out the importance of choosing the qualitative research approach as the most suitable approach which helped in achieving this study's research aims and objectives. Section 3.4 outlines the relevance of purposive sampling as the sampling method applied in this study. Section 3.5 gives a discussion of the advantages and disadvantages of using secondary data, the unstructured in-depth interviews, focus groups and key informant interviews as the data collection techniques used to obtain the data. Section 3.6 is an outline of the data analysis and analytical approaches that were used to analyse the data. Section 3.7 is a discussion of the fieldwork, this section gives an outline of how the fieldwork was approached in each case. Section 3.8 outlines the ethical considerations and study limitations.

3.2 Comparative case study with ethnographic elements and choice of cases

The QQ Section informal settlement was established in 1989 by a group of backyard dwellers from two formal areas known as Site C and Q Section in Khayelitsha one of the

biggest townships in Cape Town (Birkinshaw, 2008). QQ Section residents are predominately isiXhosa language speakers. The majority of the residents originate from the Eastern Cape Province, which is the South African province where the amaXhosa ethnic group originates from (DAG & DoHS, 2014). Khayelitsha has rapidly grown over the years with half of the population living in informal settlements (Seekings, 2013). In 2014 the population of Khayelitsha was estimated to be approximately between 400 000 and 450 000, where almost half of the households live below the food poverty line (Ballard & Muntingh, 2014).

QQ Section is situated in the northern parts of Khayelitsha Site B, bound by Jeff Masemola Road along the north-east and eastern side and Bonga Drive at the northern section (DAG & DoHS, 2014). As presented in Figure 1 the Q Section formal housing area is situated less than 2 metres from the front of the QQ Section informal settlement and across the Jeff Masemola main road at the back of the QQ Section settlement lies the BM Section informal settlement. The land on which QQ Section is located is state-owned land with high and low electrical pylons and cables known to have very dangerous effects. As shown in Figure 1 below, the settlement is 3.7 hectares of which 3.25 is occupied by informal dwellings which are built with zinc and cardboard material and two wetlands take up 0.45 hectares of the land (DAG & DoHS, 2014). Due to these challenges QQ Section is not eligible for an informal settlement upgrade. The settlement needs to be relocated to suitable land.

Figure 1

Location of QQ Section



Google Satellite Maps (2019)

According to Birkinshaw (2008), QQ Section falls under Ward 89 and it is home to +/- 3000 people. The settlement was originally called Oliver Tambo Park and it was previously run and administered by a chief. The informal settlement is known as one of the areas most neglected in Cape Town and face challenges of poor service delivery and high levels of crime (Birkinshaw, 2008). QQ Section falls under the City of Cape Town Metropolitan Municipality (CoCT) which is governed by the Democratic Alliance (DA) political party and at Ward level, the settlement is governed by the African National Congress (ANC) political party.

The second case study is Marlboro South which is situated in an industrial area, the warehouses in which the dwellings are located are privately owned by various owners. The first residents of Marlboro South occupied the settlement after the apartheid regime ended in 1994.

The dwellings in Marlboro South are tiny rooms that are clustered inside the warehouses making them unsafe, especially when there are incidences of fire. According to Böttger and Frits (2010), the constructed structures consist mostly of one-room shacks ranging from 8m2 to 25m2 clustered within, between and around the industrial buildings. The total number of occupied buildings for residential use is 38 with +/-200 occupants per building (Howe, 2016; Rubin & Appelbaum, 2017). There are no windows inside the dwellings, making them very dark even during the day, making it a necessity to have lights on throughout the day. Given that electricity is illegally connected, having lights on the whole day puts the residents at risk of having the buildings catching fire and burning down.

In some of the buildings, the occupants have created double stories using informal materials such as steel ladders used to climb to the second floor. The flooring base of the second floor section inside the buildings is created with wood, cardboard and plastic and for the rooms located around the buildings cement is mainly used for the flooring base. Furthermore, Marlboro South expanded in 2016 when people who were evicted from illegally occupied flats in Alexandra were moved by the City of Johannesburg Metropolitan Municipality (CoJ) into the area. The group of people occupied an abandoned piece of land and built a new temporary settlement called Rashuma Village. According to Howe (2016), residents of Rashuma Village have received little communication from the state about the tenure in the temporary accommodation in which they have been placed. Figure 2 is a map that shows the location of Marlboro South.

Figure 2

Location of Marlboro South



Google Satellite Maps (2019)

Marlboro South is situated close to seven of the ten wealthiest suburbs in South Africa, the closest being Sandton, which is north of Marlboro South. Sandton does not only consist of organisations such as the Johannesburg Stock Exchange, but some of South Africa's largest corporations, as well as the most expensive upmarket retail stores and apartment blocks, make up the area. Hence, it is referred to as Africa's richest square mile (Böttger & Frits, 2010). Given that Marlboro South is situated close to Sandton, its proximity to job opportunities makes it more attractive and convenient as a place of residence for employment seekers.

Additionally, Rubin and Appelbaum (2017) claim that Marlboro South has a relatively low number of foreigners which are mostly from Mozambique and Zimbabwe, with a small number from Somalia and Nigeria concentrated in the northwest blocks of the area. As per (Howe, 2016; Rubin and Appelbaum, 2017), the total population residing in Marlboro South was calculated to be 8344, with 56% being male and 44% being female. The

majority of the residents originating from different parts of South Africa. The residents in Marlboro South speak different languages. Table 1 presents the dominant first languages spoken in the area as outlined by Howe (2016).

Table 1

Dominant Languages in Marlboro South

Language	**Population**
IsiZulu	20.7%
Setswana	17.4%
Sepedi	14.1%
Xitsonga	12%
Tshivenda	9.8%
Sesotho	8.7%
Foreign languages	17.3%
Total	100%

Additionally, Marlboro South has been reported to have high levels of petty crimes such as robberies, break-ins and assault due to the use of drugs. The previously formal area finds itself transformed through modes of informal appropriations and other contradictions not obvious to people who are by-passers. Ultimately and ironically this once consciously planned buffer zone, designed to segregate groups of people pre-1994, has become home to those it was designed to keep out (Rubin & Appelbaum, 2017).

Between 2016 and 2019 which fall within the period that the data for this study was collected the CoJ which is the municipality that Marlboro South falls under was governed by the DA and at the Ward level, the settlement is governed by the ANC and DA political parties.

Thus, these two settlements were selected due to their socio-political dynamics and material dynamics. This study adopts a comparative case study design with some elements of ethnographic design. The adoption of a comparative case study design for this research study is justified by the issue that studies on water and sanitation access and gender in informal settlements often apply a blanket approach regarding the ways women experience access to water and sanitation (Chant, 2013; Chant & Mcilwaine, 2013; Sultana et al., 2013). However, given that informal settlements differ concerning the way that the socio-political and material dynamics affect water and sanitation services, these affect how women experience water and sanitation access in each settlement. In this instance, a gendered approach mainly entails a reflection of how water and sanitation access is shaped by the infrastructural and institutional dynamics which create specifically gendered inequalities with women being largest gender group affected in informal settlements. Hence, this study selected the QQ Section informal settlement which is located on state-owned land with a servitude that is further governed by the DA at the municipal level and ANC at Ward level. Marlboro South is located in an industrial area inside and outside privately owned warehouses with different owners and was governed by the DA at the municipal level in 2016-2019 when this study was conducted and governed by both the DA and ANC at Ward level. These factors impact how water and sanitation are accessed by women in both settlements.

According to Goodrick (2014) comparative case studies are useful when there is a need to understand and explain how features within the context influence the outcome of a phenomenon. The author further argues that “comparative case studies involve the analysis and synthesis of the similarities, differences and patterns across two or more cases that share a common focus or goal” (Goodrick, 2014, p. 1). Thus, a comparative case study design is a more suitable research design that helps to highlight the similarities, differences and patterns which frame women’s access in the two informal settlement contexts.

This study adopts a comparative case study design with some elements of ethnographic design. Creswell (2013, p. 91), defines ethnographic research as “involving people who

are located in the same place or interacting on so frequent a basis that they develop shared patterns of behaviour, beliefs, and language". Creswell (2013) further claims, ethnography is not the study of a culture, but a study of the social behaviours of an identifiable group of people. The main focus and interpretation of the data in this study are drawn mainly from the beliefs and experiences of women towards the infrastructural and institutional arrangements present in the two settlements and how these arrangements have affected their water and sanitation access. Ethnography further requires the researcher to spend extensive and prolonged time in the field conducting interviews, observing and taking field notes regarding the behaviours and beliefs of the group being studied (Naaidoo, 2012). However, in this research study, it was a challenge to adopt a full ethnographic research approach due to the unsafe conditions in the two settlements. Thus, even though this research has some elements of ethnographic design, the main research design adopted is the comparative case study design.

3.3 Qualitative approach

This study is embedded in understanding the specific configurations of infrastructural and institutional arrangements that exacerbate or mitigate women's access to water and sanitation services through their lived daily experiences in two distinct informal settlements. According to Yin (2011) qualitative research has to do with studying what people's lives mean within the real-world context. Thus, to fully understand the experiences and daily water and sanitation struggles of women in the two settlements the qualitative research approach is the most suitable approach that was used to gather the data. The research questions display two main features that theoretically required a qualitative approach. First, the research was conducted in the natural settings of the social actors themselves. This includes two informal settlements, Marlboro South in Johannesburg and QQ Section in Cape Town.

Second, this study focused on doing an in-depth investigation and understanding of the actual experiences of women towards the institutions of power and the types of water and sanitation access they are accustomed to in the two settlements. Furthermore, unlike the quantitative approach which uses a close-ended type of survey questions, by using open-

ended interview questions the qualitative approach allowed the respondents to answer questions according to their own lived experiences and further gave me as the researcher an opportunity to probe (Creswell, 2013). This enriched the data collected. Additionally, the qualitative approach enabled me to explore the views and perspectives of groups of women residing in different informal contexts, with diverse daily experiences regarding the institutions of power associated with the settlement and their water and sanitation access at both household and community level (Choy, 2014).

Just like other research approaches the qualitative research approach has limitations. Silverman (2006) claims that since the qualitative approach lacks generalisation it has the disadvantage of having findings that do not extend to the wider population with the same degree of certainty. However, in this type of research generalisation would have been a limitation rather than a strength which would have led to the loss of richness in the data that has been obtained from individual participants (Polit & Beck, 2010).

A further limitation of the qualitative research approach according to Choy (2014) is that the personal experiences and knowledge of researchers can influence the conclusions, allowing particular important issues to be overlooked. Yet, I find my experience in working on water and sanitation-related issues mainly in poor areas as an advantage. My previous experience assisted me in dealing with the complex meanings of the data. It further allowed me to better understand how the formal and informal water and sanitation arrangements and the state institutions, CSOs and community leadership structures present in the QQ Section and Marlboro South settlements affected water and sanitation and the implications of these effects on women's access.

3.4 Purposive sampling

The nature of the participants and the research approach that is used in this study gave purposive sampling more credibility as a suitable sampling method to be applied throughout this study. All the household and community respondents were women residing in two informal settlements. These groups of women possessed the required knowledge regarding their daily water and sanitation struggles through their lived daily

experiences. There were 40 in-depth household interviews conducted in QQ Section and 37 in-depth household interviews conducted in Marlboro South, adding up to a total of 77 household respondents. Furthermore, two focus group discussions were held in each site adding up to a total of four focus group discussions that were conducted for the study. Moreover, each focus group in both sites had a total of seven participants.

There were further interviews conducted with key informants these included two municipal officials who deal with water and sanitation services in informal settlements in the City of Cape Town for the case of QQ Section. Additionally, interviews were conducted with the leader of the QQ Section community committee, one representative of the South African National Civic Organisation in Cape Town (SANCO), 1 person who worked under Abahlali baseMjondolo (ABM) when their Western Cape offices were based in QQ Section and one telephonic interview with the national leader of ABM who is based in Durban at the ABM headquarters. Further, interviews were held with three representatives of the Social Justice Coalition (SJC) in Cape Town.

For the Marlboro South case study, key informant interviews were held with one official working closely with the councillor in Marlboro South. Second, an interview was conducted with one representative from the Community Organisation Resource Centre (CORC), another interview was conducted with a representative from Federation for the Urban Poor (FEDUP) and another interview was conducted with a representative from the Informal Settlements Network (ISN). There was one further interview conducted with one of the previous Marlboro South Warehouse Crisis Committee (MWCC) leader. Interviews were further conducted with an official working close with the Ward 108 councillor and the Ward 108 councillor in Marlboro South. Table 2 presents a summary of the study sample.

Table 2

Study Sample Summary

Interview categories	Organisations/Participants	Total respondents/participants	Settlement represented
QQ Section study participants			
Household interviews	QQ Section	40	QQ Section
Focus groups	QQ Section	2 groups of 14 total participants	QQ Section
Key informant interview	QQ Section community committee leader	1	QQ Section
Key informant interviews	City of Cape Town	2	QQ Section
Key informant interview	Former ABM employee and National ABM leader	2	QQ Section
Key informant interviews	Social Justice Coalition	3	QQ Section
Key informant interview	South African National Civic Organisation	1	QQ Section
Marlboro South study participants			
Household Interviews	Marlboro South	37	Marlboro South
Focus groups	Marlboro South	2 groups of 14 total participants	Marlboro South

Key informant interview	Official working close with the Ward 108 councillor	1	Marlboro South
Key informant interview	Marlboro South Ward 108 councillor	1	Marlboro South
Key informant interview	Community Organisation Resource Centre	1	Marlboro South
Key informant interview	Federation of the Urban and Rural Poor	1	Marlboro South
Key informant interview	Marlboro South Warehouse Crisis South Committee member	1	Marlboro South
Key informant interview	Informal Settlements Network	1	Marlboro South

3.5 Data collection techniques

3.5.1 Secondary data

The research phenomenon being investigated in this study required gathering information on the demographics and past water and sanitation conditions of the two case studies. However, it was a challenge getting accurate information in this regard, especially given that informal settlements erupt and grow frequently. As argued by Hox and Boeije (2005) secondary data is data collected previously by other researchers or institutions. Hence, using secondary data has many advantages such as saving costs and time since the data is readily available. Yet, secondary data also has disadvantages, one of the disadvantages involves not knowing the reliability and the period when the data was collected (Hox & Boeije, 2005).

Even though these disadvantages exist, yet, using secondary data sources in this study assisted in capturing some of the background information regarding the settlements and the socio-economic issues in the two informal settlements which were difficult to capture from the primary sources. Moreover, reviewing secondary data further assisted in learning what is already known and what the gaps in knowledge are on issues related to the water and sanitation conditions in informal settlements and the gendered implications about such services in informal settlements (Johnston, 2013).

3.5.2 Primary data

Unstructured in-depth interviews

Interviews are best suited for understanding people's perceptions and experiences regarding a phenomenon. According to Showkat (2017), in-depth interviews gives the researcher access to the thoughts, reflections, motives, experiences, memories, understandings, interpretations and perceptions of the respondents regarding the topic under consideration. As a result, this type of qualitative method offers the research the opportunity to discover why people construct the world in particular ways and think the way they do (Morris, 2015).

Using in-depth interviews gave me as the interviewer the opportunity to observe the respondents' behaviour and the way they reacted when responding to the questions. Paying attention to the interviewees was key as it assisted in filling some of the gaps, especially in instances where they would give contradictory information. In such instances, good follow up questions and probing were key to verify the information given. Furthermore, using in-depth interviews in this study helped in uncovering thorough details of the women respondents' individual experiences and perspectives, in both QQ Section and Marlboro South regarding their knowledge on how the infrastructural and institutional arrangements affected water and sanitation conditions in the settlements. Furthermore, the in-depth interviews allowed the women to share their lived experiences regarding water and sanitation access in both settlements. Given that much of the information which involves the institutional arrangements is very sensitive as it entails political and unequal gender power dynamics, which could have put the respondents' lives in danger, using

one on one in-depth interviews allowed many of the respondents to disclose such useful confidential and sensitive information with some ease. It would have not been possible to obtain such sensitive information through focus groups, surveys and other forms of data collection instruments.

Additionally, having the one on one in-depth interviews with the women respondents, saw many of the respondents feeling empowered, after a long time of being abused and bullied. Some felt that they found their voices to speak up against the constant struggles which they endure and often go unnoticed especially in Marlboro South where issues of patriarchy persist.

However, even though in-depth interviews were a good instrument to obtain the data needed for this research, some limitations were encountered while conducting the interviews. First, both study sites are low-income areas which meant that conducting long interviews with the women was a challenge, some of the women did not have time to sit and be interviewed they had to go out to look for employment. Hence, some refused to participate since they would not be offered any incentive for their time. Second, given that women are often caregivers and are the ones who have to ensure that the household is taken care of, some of the respondents were doing house chores while being interviewed, which meant that they were not fully concentrating on the interview. Moreover, in some circumstances, it was difficult to have interviews with women household members as they felt that they needed permission from their male counterparts. All these challenges further prolonged the data collection period.

Focus groups

Focus groups are normally made up of a small group of people who come from similar social backgrounds or who have similar experiences or concerns. Data is generated through the interaction between group participants. There were a total of four focus group discussions conducted for this study. Two focus groups were conducted in each of the two settlements and each of the groups were made up of seven women participants. When choosing the focus group participants it was important to ensure that the groups

were mixed with women who were there when the informal settlement was formed, together with women who arrived after 10 years of the settlement's existence in both study sites. While doing the individual household in-depth interviews, I found that the women who formed part of the formation of the settlements and those who arrived 10 years after the settlements were built had different experiences regarding life and access to basic services in the settlements. Hence, I decided to mix new residents with old residents in all the focus groups.

As such the focus group discussions were stimulating, especially hearing how water and sanitation conditions in the settlements evolved. As the individual participants reflected on their own experiences, they also listened to the views of others which triggered more interesting discussion and information that was not obtained on the one on one in-depth interviews. This proved Ritchie and Lewis' (2003) point, that in focus groups participants present their views and experiences, but they also listen to other's points of view which assists in triggering information within the focus group participants further encouraging a fruitful discussion.

Additionally, the environment and place where the focus groups took place were important factors. As Hennink (2007) states that for a focus group discussion to be successful the development of an accommodating, non-threatening environment is important. This allows participants to feel comfortable in engaging regarding their experiences and opinions. Finding a more comfortable venue where the focus groups were held was crucial, especially in the QQ Section case where political tensions within the community were a major issue. Thus, the chosen venue was a communal space where all the participants felt free and comfortable to share their views and experiences without feeling intimidated. Hennink (2007, p. 6) claims that, "the aim of the focus group is not to reach a consensus on the issues being discussed, it aims to encourage different views that provide a better understanding of the attitudes, perceptions and opinions regarding the research". The point Hennink (2007) makes is important as it assisted in successfully moderating the group discussions. Understanding that all differing and similar opinions and experiences shared by participants were important and no one

answer was the right answer, allowed and encouraged participants to freely share and voice out their views and opinions. There were instances where some participants felt that their views and opinions were more correct than others. In such instances the participants had to be reminded that all their individual views and opinions matter as people do not experience things the same. This further assisted in ensuring that everyone in the group participated and spoke and not felt intimidated or felt that their opinions did not matter.

Furthermore, as argued by Morgan (1996) that the focus group has the limitation of some participants who withhold information that they would feel comfortable in revealing privately. Hence, in this study focus group discussions were used as an additional data collection technique. Confidential information was mostly shared during the one on one in-depth interviews. The focus group discussions helped in enriching the data obtained from the in-depth interviews and further ensured the credibility of the collected data through triangulation with the other data collection techniques which were used to obtain the data.

Key informant interviews

Key informants are individuals who possess the necessary knowledge regarding a particular issue and are willing to share the knowledge they have regarding the issue with the researcher. According to Heyrman and Goedhuys (n.d), key informant interviews are not to be selected randomly but need to be selected according to who has access to the needed information and who is willing to share the information. Thus, when selecting the relevant key informants in this study I had to speak to a representative who possessed knowledge regarding the two settlements at both CSO and government levels. In this regard in QQ Section SANCO, SJC and ABM representatives were interviewed at the CSO level. The interviewed CoCT officials were divided between an official who worked in the municipality's overall water and sanitation services department and the second official who worked specifically on water and sanitation services in informal settlements including QQ Section.

While in Marlboro South at CSO level CORC, FEDUP and ISN representatives were interviewed. In terms of government institutions representatives, the Ward 108 councillor and a representative that works closely with the councillor in Marlboro South were interviewed. Moreover, interviewing key informants from the community leadership structures in both settlements was useful. The representatives from these structures possessed knowledge regarding the overall relations the settlements have with the government institutions and CSOs since community leadership structures act as community voices.

Thus, selecting organisations that worked specifically in the two settlements helped triangulate information that I was getting from the household in-depth interviews, focus groups and information I was getting from the interviewed municipal officials and Ward councillor. As a result, this further assisted in filling underlying gaps, from the data obtained from the household interviews and focus group discussions. Thus, further helping with challenges of credibility.

Moreover, getting the point of view from the different key informants regarding water and sanitation issues further assisted in determining the accuracy and validity of the information obtained not only from the community respondents but also information obtained from secondary data sources. As such, the key informant interviews allowed for the exploration of the perceptions and opinions of people who have vast knowledge regarding water and sanitation conditions in both the QQ Section and Marlboro South.

3.6 Data analysis and analytical approaches

Content analysis was applied as the analytical approach in which both the content and context of the data collected were analysed, using excel. As simply defined by Babbie (2001), content analysis is the study of recorded human communications that focuses on classifying text raw data into emerging themes, through the identification of codes. Harnett (2015) further stipulates that content analysis is usually conducted in a natural setting, allowing categories to emerge originating from the coders' subjective conscious experience of the world. Through coding the researcher is forced to interpret and make

judgements about the meanings of chunks of texts, Kohlbacher (2006) refers to this as the heart and soul of content analysis.

Content analysis was a great analytical tool for this research, especially given that this study adopts a comparative case study design using different data collection tools. Content analysis enabled these different types of qualitative raw data to be analysed, this is not the only advantage from a practical point of view, but it is also advantageous as far as quality and criteria are concerned (Kohlbacher, 2006). In this study the relevant themes and codes were identified by looking at how the respondents in each study site presented their experiences regarding the infrastructural and institutional arrangements, and their role in affecting water and sanitation access. The aim was to check for the frequency of each response. These responses were then linked and interpreted according to the respondents' views.

Thus, using content analysis to analyse the data in this study assisted me as the researcher to go beyond merely identifying themes and codes. It gave me the ability to understand the similar and differing social realities and hardships related to water and sanitation access endured by women residing in an informal settlement located on state-owned land with servitudes, compared to women residing in an industrial area with dwellings located in and around privately owned abandoned warehouses more subjectively.

Furthermore, even though content analysis has the advantage of being very flexible in enabling the analysis to be done from different qualitative data sources, it has the disadvantage of being complex (Harnett, 2015). The main complexities that were experienced in using content analysis in this study were mainly linked to the volume of the collected data. The data collected from conducting interviews and focus groups was rich. However, I found the quantity to be overwhelming. Having to do a content analysis of 77 in-depth interviews and four focus groups was difficult to manage. There were a lot of points that I found to be interesting coming out of the data analysis process yet, I had to exclude a lot of this information as it did not relate to my research objectives.

3.7 Fieldwork experiences

The way that fieldwork was approached in both cases was through the use of the data collection instruments interchangeably. In both study sites I would first conduct 15 household in-depth interviews. Following the 15 interviews I would set up interview meetings with the key informants to obtain the relevant data needed for the study and to further verify the information I obtained from the household interviews. After conducting the key informant interviews I would go back to the women respondents to conduct the remaining household interviews and focus group discussions. This helped me to verify the information I obtained from the key informants. The way I approached the fieldwork and the data collection instruments used in this research were key in assisting with the gaps and issues of validity of the data obtained and reaching the overall conclusion of the study.

QQ Section

Before commencing with data collection, community representatives in both case study areas were approached in October 2017 to gain community entry. I communicated with the representatives regarding what my research was about and why I decided to conduct it in the respective settlements. The representatives notified the community committees on my behalf. Initially, the plan was to first test the interview questions in Marlboro South which is the study site closest to me, however, the community representative who was going to assist me on the ground was not available. Hence, the testing of the data collection instruments was carried out in QQ Section in November 2017. I tested the interview questions by conducting eight in-depth interviews with women in QQ Section in November 2017. Testing the questions assisted in revealing other important questions which needed to be included on the interview schedule and further helped in ensuring that the flow of the questions was aligned properly. Testing the questions, therefore, helped in strengthening the interview schedule and ensuring that time was not wasted asking irrelevant questions when the initial fieldwork commenced.

On the 1st of February 2018, the initial fieldwork began in the QQ Section where a total of 40 in-depth interviews were conducted with women within the informal settlement.

However, doing the fieldwork was a constant challenge. QQ Section has been reported to have high levels of crime and while I was testing the interview schedule in November 2017, I also noticed that there were high political tensions between the residents, Ward councillor, ANC political party and the CoCT which is under the DA political party administration. Collecting data under such conditions was difficult as I felt that my life was at risk during the whole data collection period. The conditions I worked under supported the views of Goldstein (2014) who argues that researchers' lives are constantly at risk not only due to their presence in a foreign environment and asking questions that might intensify insecurity from the locals due to mistrust of strangers asking questions. They further face risks when they are in an environment marked by high levels of criminal, political, and/or daily social violence.

I thought being assisted by someone who was born in the area and well known would increase my chances of safety. But all residents complained of crime due to gang activities and a lot of house break-ins and robberies. As a result, no one was safe in the area. This meant that I had to be extra vigilant when moving from one shack to another. Moreover, I had to commence with data collection earlier than I initially planned and finish early before the area got very busy. This meant that every day I had to start at 8am when people had left for work and kids left for school and the area is not too busy and I had to finish at 3pm when schools were coming out and before a lot of people returned from work. Starting early to collect data had a further challenge as many of the women had just finished preparing for their loved ones to go to school and work, so they went back to bed to get some sleep and rest after the preparations and some women were starting to do their household chores. This meant that there were only a few respondents available per day. In most instances, I had no choice but to sit and interview the women while they were busy cleaning their houses and doing their household laundry. This was not an easy task, many of the respondents deferred the interview to a later time during the same day and others deferred it to another day. This further affected the time I spent in the area and given that the area was unsafe, this further increased the risk of me being attacked.

Such criminal challenges and the conditions I had to work under in QQ Section further substantiated the high responses of lack of safety and assault on women, associated with water and sanitation services in the settlement.

Furthermore, there were many instances where I felt that the respondents wanted to involve me in their political battles due to their frustration with the City of Cape Town, ANC political party and their Ward councillor. As argued by Bénit-Gbaffou (2010) that, oftentimes when dealing with government and communities a researcher can be tangled in political battles. Thus, I had to constantly remind the participants that I am merely a student who came to collect data in their area and I do not work for the government. I had to further constantly tell them that I am ethically bound not to personally involve myself in their communal battles with the CoCT and the Ward councillor. Additionally, there was a lot of mistrust among community members. Others felt that there were informants within the community feeding false information and sometimes confidential communal information to the ward councillor regarding decisions and steps to be taken to address and hold those in power accountable for the lack of development and poor service delivery in the area. This somehow made me nervous and a bit threatened because I was warned that due to the tension between some of the community members and the Ward councillor my presence in the area can be perceived as a threat by the Ward councillor and can endanger my life.

As such I found myself entangled in community political issues which I had nothing to do with. Majority of the residents in QQ Section including the community committee leader told me if I would have gone through the Ward councillor, instead of the community committee, to get community entry in the settlement then none of the residents would have participated in my study. This is due to the bad relationship between the community and the Ward councillor.

Additionally, when it came to the focus group discussions, the initial plan was to do a mapping exercise. The first group I encountered in QQ Section struggled with the exercise and many did not want to participate as they felt that they could not draw. I had to change

the whole focus group exercise, instead of having the participants do the drawing I asked them questions and plotted the responses on the map myself. Due to such challenges, a lot of time was spent doing the exercise, which meant that with the remaining focus group discussion I had to change from doing a mapping exercise to making it more discussion-oriented. This form of focus group approach gave all participants the opportunity to share their experiences while using a set of guiding questions to drive the discussion. The fieldwork ended on the 21st of March 2018 in QQ Section.

Marlboro South

On the 26th of March 2018, I began collecting data in Marlboro South, originally the plan was to collect data from only the warehouses which were taken over by the City of Johannesburg and were due for upgrading. However, I learnt that after the DA took over the CoJ all the negotiations fell through. On my first visit to Marlboro South, I learnt that looking at only the warehouses which were due for upgrading would not do justice for my study. I discovered that the living conditions and access to water and sanitation services were different for each of the warehouses and I ran the risk of missing valuable information if I would have only focused on the three which were due for an upgrade. Moreover, the implications of the changes in government and how the DA was handling the whole issue of people occupying and residing in abandoned buildings further influenced my decision to focus on all the warehouses occupied for residential purposes in Marlboro South and not just those owned by the CoJ.

Yet, the situation on the ground was not simple. As I began with the data collection I found that Marlboro South is divided into two wards, Ward 108 which is under the ANC and Ward 109 which is under the DA administration. These divisions were a cause of political tension between community members from the two different Wards. This caused problems during the data collection period as some respondents in the DA Ward voiced out that they were sceptical of sharing too much information regarding their Ward, as I might share this information with residents from the ANC. I had to constantly explain and assure the respondents regarding confidentiality when they participate in the research. Furthermore, there was anger from the general study respondents towards the CoJ and

the relevant Ward councillors and how they have handled issues of services provision in the settlement. This also affected the data collection process, the respondents felt that this research was reminding them of their painful living circumstances and empty promises from the municipality regarding service delivery improvements and the failed settlement upgrade and rezoning process.

Moreover, unlike QQ Section where women were willing to participate in the study, most of the women in Marlboro South were more reserved and did not want to participate in the study due to the issues of patriarchy that persists in the settlement. There were several instances where women were not comfortable to participate in the research. Some of the women postponed their participation and asked me to return the following day after they would have gotten permission from their male building committee leaders and spouses and others refused to participate in the study.

Furthermore, given that the warehouses were very dark inside, this increased the risk of being attacked inside each warehouse while I was walking and knocking from shack to shack. Having a male community member walking me through the settlement helped. However, in most instances, he had to wait for me outside each warehouse so that his presence would not affect the responses women would give and to allow the women respondents to feel free and secure while they participate in the research. Other safety challenges further emerged from having to access dwellings that were located at the top-level inside and outside some of the warehouses, the material used to construct the ladders to get to the top and the top base was old scrap material which would have collapsed and I could have been badly injured. The data collection in the Marlboro South informal settlement ended on the 24th of May 2018 and I managed to secure an interview with the Ward 108 councillor on the 22nd of October 2018.

3.8 Ethical considerations and study limitations

Due to the nature of the phenomenon that this research investigates, ethical considerations are linked directly to the study limitations. The first ethical issue and study limitation is the delicate nature of working with marginalised women in informal

settlements as study participants, this required me not to only apply for ethics with the Wits ethics committee. While doing fieldwork, the participation sheets I had to give to the participants to read, fill in and sign became a bearer in many instances. Some of the participants and potential participants failed to understand the reasoning behind signing a document while they are promised anonymity which resulted in some of the women refusing to participate in the research. These conditions were worse in Marlboro South, as previously explained that there are high patriarchal practices that persist in the settlement. There were occasions where the women study participants either refused to participate or I was told to return the following day after they would have been granted permission by their spouses to participate in the research. While others would stop in the middle of the interview when they suspect that their spouses are about to return home and ask me to return the following day when they are alone and would feel comfortable to speak. As a result, I did not get the 40 respondents I planned to interview, I ended up interviewing 37 women. This further prolonged the period I spent collecting data.

Additionally, one of the major limitations was related to my safety while collecting data. As highlighted in the fieldwork discussions in this chapter my life was at constant risk due to the high criminal activities in both settlements. However, in QQ Section, the conditions were worse due to the political conflicts between the community and the Ward councillor. Given that some of the households in the settlement were said to be the Ward councillor's informants, and my presence in the settlement could be perceived as a threat which was a potential life threat for me, I had to be extra attentive and more observant when I conducted the interviews.

These conditions had the potential of affecting the data I collected, especially in the few households which were said to be the Ward councillor's informants. Being extremely prepared assisted in this regard, as some of the respondents either were uneasy and asked too many suspicious questions and gave half responses. Having good follow up questions was very useful in such circumstances, they assisted in obtaining the real answers the participants were sceptical in giving. The use of follow up questions also helped in verifying the information.

Other study limitations related to the case of QQ Section had to do with the limited and lack of crucial secondary data of the settlement. For a person who is not familiar with the area, when searching for it on google maps it does not appear, one needs to know the different street names and layout of the settlement to find it on google maps. Without much information regarding the location of QQ Section, it was further difficult to get current secondary data and statistics about the settlement and its demographic information. This served as a limitation for my study. The secondary data and demographic information of the settlement is needed for the clear understanding of the water and sanitation conditions, to know when the settlement was created and the number of people that reside in the settlement. Having this current information would have made it possible to compare the previous water and sanitation conditions to the current situation. What assisted me in this instance was mixing old occupants with new occupants in focus group discussions. This helped in understanding the water and sanitation struggles from the perspectives of women who resided in the settlement when it first started and compared these with the perspectives of women who occupied space in the settlement at a later stage.

Additionally, other study limitations were experienced in connection with key informants in both cases. Key informant interviews were required with the relevant Ward councillors and municipal officials in both study sites. Getting hold of these key informants was challenging. In the case of QQ Section, it was a challenge getting in contact with the Ward councillor. I sent emails requesting an interview with him and did not receive any feedback. In the case of Marlboro South, it was a struggle getting hold of municipal officials who were willing to be interviewed. At the time I embarked on fieldwork in Marlboro South in 2018, the CoJ had undergone a lot of changes after DA took over the municipal administration in 2016-2019. Many of the officials who worked for the City when it was led by the ANC left. Hence, I was coming across obstacles, when I needed a municipal official who could assist in my research. Many claimed to be busy and others declined on the basis that they were new in office and were not familiar with the case of Marlboro South. However, I managed to interview the councillor of Ward 108, which is

one of the two wards that Marlboro South falls under. This assisted in getting most of the information that needed the municipality's input.

Moreover, given the heterogeneous nature of informal settlements, the two case study settlements used in this research do not cover conditions in all informal settlements. As a result, this is one of the study limitations which needs to be considered when engaging with this thesis.

3.9 Conclusion

This chapter gave an overview of the systematic approach to solving the research problem. First, this chapter gave an outline of why a comparative case study approach with ethnographic elements is the best suitable approach for this research. In this regard, the choice of selecting specifically QQ Section and Marlboro South as the two case studies that will assist in achieving answering the research aims were given. Second, this chapter gave a discussion of why the qualitative approach was chosen as the most suitable approach that will help in carrying out this study. Third, this chapter gave an overview of purposive sampling as the chosen sampling method used in this study and the number of women who participated at the household level and the total number of focus group discussions.

Furthermore, a general overview of the total number of key informant participants was given. Fourth, a discussion of the data collection techniques and how they are suitable techniques for this type of research was outlined. These include secondary data, household unstructured in-depth interviews, focus group discussions and key informant interviews. The fifth section of this chapter gave an outline of the data analyses and analytical approaches that were used to analyse and interpret the data. The last two sections gave overview discussions of the fieldwork experiences in both the QQ Section and Marlboro South and the study ethical considerations and limitations.

CHAPTER 4

THE POLICY CONTEXT

4.1 Introduction

In 1994 the South African government inherited a divided nation, with discriminatory practices and levels of severe inequalities. Consequently, this was the case with access to basic services, 30% of South Africans were estimated to be lacking access to water services and a further 50% had no access to sufficient sanitation in 1994 (Nnadozie, 2011). To deal with these levels of inequalities, the new government had to replace the Water Act of 1956 with new water legislation. As such dealing with water and sanitation inequalities and challenges left by the apartheid regime has been a daunting task for the government. The majority of the backlog in water and sanitation access are mainly found in informal settlements.

This chapter therefore, provides the changes that have taken place in the policy environment over time after 1994 with a particular focus on the decentralisation of water and sanitation and gender and how these factors have been handled in South African informal settlements. The policy context aims to outline the driving forces of the policy changes, the gaps in policy and the implications these policies have mainly on gender in water and sanitation access in informal settlements. Thus, in this regard, this policy framework will discuss the South African Constitution Act 108 of 1996, Water Services Act 108 of 1997, Department of Water Affairs and Forestry Gender Policy of 1997, National Water Act 36 of 1998, Free Basic Water Policy of 2001, White Paper on Basic Household Sanitation of 2001, Strategic Framework for Water Services of 2003, Mainstreaming Gender into the Water Services Sector National Implementation Strategy and Action Plan of 2006-2010, Free Basic Sanitation Implementation Strategy of 2009, and the National Sanitation Policy of 2016. The last section of this chapter will give a discussion on the implications of the policy changes on gender in water and sanitation services delivery in South African informal settlements.

4.2 Constitution Act No. 108, 1996

After the apartheid regime was overthrown in 1994, in 1996 South Africa adopted a new Constitution and became a Constitutional democratic state with three spheres of government. These spheres are; the national, provincial and local government and they are all distinctive, interdependent, interrelated, they all have legislative and executive authority in their own right (RSA, 1996). Section 154 of the Constitution, obligates the national and provincial spheres to support and strengthen the capacity of local government through legislative and other measures. This will give municipalities the ability to manage their own affairs, exercise powers and perform their functions efficiently. Section 139 of the Constitution further obligates the national and provincial spheres to monitor the performance of local government.

Additionally, the Constitution's main purpose is to ensure that essential changes are made in the unjust political, economic and social relations that were left by the apartheid regime. To ensure that this is achieved, chapter 2 of the Constitution of the Republic of South Africa, Act 108 of 1996 contains a comprehensive Bill of Rights that embraces human rights principles. This includes section 27(1) (b) which claims that everyone has the right to have access to sufficient water. While the right to have access to adequate sanitation is not specifically provided for in the Constitution, section 24(a) and section 10 speaks to issues of sanitation. According to Section 24 (a), everyone has a right to an environment that is not harmful to health or well-being, while section 10 states that everyone has inherent dignity and the right to have their dignity respected and protected. Section 9 (3) speaks to issues of equality and discrimination where it specifically claims that the state may not unfairly discriminate directly or indirectly against anyone on the grounds of gender (RSA, 1996).

The SAHRC's (2001) 3rd Economic and Social Rights Report further interprets what access to water and sanitation entails as per the Constitution. As per the SAHRC (2001) access to water and sanitation involves the economic and physical accessibility to these services. Physical accessibility refers to water and sanitation being available within a distance accessible to everyone including vulnerable individuals such as women.

Furthermore, physical accessibility also refers to the availability of adequate infrastructure and the effective maintenance of facilities and equipment and equitable access even for under serviced areas such as informal settlements.

However, section 27(2) of the Constitution presents a limitation clause for section 27 (1) (b), section 24 (a) which claims that the state must take 'reasonable legislative and other measures, within its available resources, 'to achieve the progressive realisation of these rights' (RSA, 1996). With the limitation "reasonable" towards the realisation of equitable access to water and sanitation placed in the Constitution, by no means are these rights guaranteed, as there are other demands associated with legislative and macro-economic processes that frame what is measured as "reasonable" (Davidson-Harden, 2009). Thus, the recognition of these rights further imposes certain duties on both the state and non-state actors that can be enforced by courts (Davidson-Harden, 2009).

As argued by Liebenberg (2005) there has been more focus on the extent to which the courts should assert an enforceable right to the provision of water and sanitation services that are sufficient and the access is equal access for those who lack access to these services. The SAHRC (2014) highlights that the provision of equitable access to water and sanitation in South Africa affects a large portion of the poor population. This mainly includes informal settlement dwellers, and this should be mainly looked at through the lens of the high degree of inequality that exists in the South African society.

4.3 The Water Services Act No. 108 of 1997

Given the limitations in the Constitution and the lack of clarity on what constitutes sufficient water and sanitation access, the Water Services Act was introduced in 1997. The Water Services Act is aimed at fulfilling the Constitutional rights of access to basic water and sanitation (DWAF, 1997). As such, Section 3 of the Act entrenches the right to basic water and sanitation access for everyone. All water services institutions are obligated to take reasonable measures to ensure that these rights are fulfilled. Additionally, all water services authorities are obligated to have measures in their water services development plan that will ensure that these rights are fulfilled.

Moreover, the Act recognises that the rights of access to basic water and sanitation supply are necessary to ensure that people have sufficient water and the environment is not harmful to the health or well-being of citizens. The Act further aims to address inequalities in terms of access to water and sanitation services. The Water Services Act acknowledges while municipalities are given the responsibility and the authority to oversee the provision of water and sanitation services, all government spheres are obligated to ensure that water and sanitation services are provided in an efficient, equitable and sustainable manner.

The Water Services Act defines basic water services as the recommended minimum standard of water services provision that offers reliable access with enough quantity and quality of water to households. This also includes households residing in informal settlements, to support life and personal hygiene (Dugard, 2016).

4.4 Department of Water Affairs and Forestry Gender Policy, 1997

The DWAF Gender Policy was constructed and implemented around international and national legislative frameworks such as section 9 of the Constitution which prevents discrimination. It was constructed around laws relating to participatory and development approaches. According to the Policy principles, for the Policy to achieve the Constitutional principle of gender equality the department obligates itself in recognising and addressing the current challenges that do not recognise women taking their full part in society. In this regard, the Department of Water Affairs and Forestry (DWAF) is committed to driving a programme of action which recognises present gender roles and works to respond to past gender inequalities. To achieve this, discriminatory practices should be put to an end and recognition and special treatment should be given to women as means towards redressing the imbalances of the past.

4.5 National Water Act, No. 36 of 1998

The National Water Act is the main legal tool for managing water resources. It replaced the Riparian Water Act of 1956. The National Water Act of 1998 emphasises that water

is a scarce and unequally supplied national resource that transpires in different forms, which are all part of the unitary inter-dependent cycle (DWAF, 1998). Hence, the National Water Act aims to ensure that the nation's water resources are safeguarded, used, persevered, managed and controlled in ways that consider various factors including meeting the needs of the current and future generations (DWAF, 1998).

Additionally, the Act recognises that water is a natural resource and it belongs to everyone and the apartheid system prohibited certain groups from having equal use and access to water. As a result, the National Water Act's objective is to promote equal access to water and it further aims to restore the outcomes of race and gender discriminations caused by the apartheid system. Moreover, the National Water Act aims to ensure that the growing water demand is provided for, to promote effective, sustainable and beneficial water usage in the interest of the public. The Act further recognises that the main aim of water resource management is to attain the sustainable use of water for everyone's benefit. The National Water Resource Strategy-1 and National Water Resource Strategy-2 form part of the two instruments that are created to help achieve the aims of the National Water Act.

National Water Resource Strategy-1

The National Water Resource Strategy-1 (NWRS-1) describes the way that South Africa's water resources will be protected, used, developed, conserved, managed and controlled as per the Policy and law requirements (DWAF, 2004). Section 2.4.2, of the strategy, outlines the challenge of population growth and its impact on water availability. The NWRS-1 argues that even in instances where water is available the poor struggle to access the water due to a lack of infrastructure to transport the water closer to the people.

Section 2.4.2 NWRS-1 claims that for years in South Africa the solution to deal with water demand has always been to construct more infrastructure. However, as the use of water reaches its full potential, the resource development costs increase and the environmental effects become more prominent.

Population growth has always been accepted as one of the main drivers of water demand even though water requirements for basic human consumption are relatively low, it is less than 5% of the current national requirements for water, or about 1% of the mean annual runoff (DWAF, 2004). The main factors that result in high demand for water are economic activity and the standard of living which in itself is connected to economic activity. Recognising this relationship presents a valuable guide for managing water (DWAF, 2004).

Furthermore, NWRS-1 acknowledges that the standard of living, population and economic growth all are dependent on a range of external influences. The external influences for population and economic growth are linked to socio-economic standards and are regarded as the main determinants of future water requirements. The greatest long-term uncertainty regarding water requirements for the future exist, this was measured by the trend towards urbanisation and the anticipated stronger economic growth in the bigger industrial and urban centres (DWAF, 2004). Therefore, DWAF (2004) claims that more attention was placed upon the main urban centres in the subdivision of population, with less substantiation of the population predictions for smaller centres and some rural areas.

National Water Resource Strategy-2

The National Water Resource Strategy (NWRS-2), builds on the first National Water Resource Strategy (NWRS-1). The NWRS-2 is geared around the notion of water as a basic human need and the acknowledgement that water is important for equal socio-economic development. As per the NWRS-2, the principle of equity deals with prioritising the population that was previously discriminated against in terms of water access and the economic benefit of water. As such the principle of equity is viewed as fairness that permits for the various practices in water management, in response to different social, economic and environmental needs. It is important to differentiate between what constitutes access to water services equity, access to water resources equity and equity in access to benefits from water resource use through economic, social and

environmental development and management. Differentiating these factors assists in bringing the concept of equity to a practical level.

Furthermore, the NWRS-2 acknowledges that the well-being of urban dwellers is important for the economic development of the country, thus it is important to meet the basic needs of the poor and to sustain the environment. Furthermore, the NWRS-2 explains that water resource and water services planning will be aligned with the vision expressed in the Urban Development Framework due to the importance of cities and towns. This will be done to make provision for the development of urban settlements that are spatially and socio-economically integrated, free of racial and gender discrimination and segregation, allowing people to make residential and employment choices to follow their ideals.

4.6 Free Basic Water Policy, 2001

When the new democratic government came into power in 1994, water and sanitation legislation was more centralised. This approach seemed not to reach the more marginalised groups, including informal settlement communities and this created the need to further redress water and sanitation inequalities. Thus, the post-apartheid government re-organised the provincial structures, decentralising bureaucracy and shifting budgets to favour the poor. In the early 2000s, there was a shift in the South African water legislature which was decentralised from the national government to local government. Yet, the national and provincial spheres are still constitutionally bound as the spheres that have the legislative and executive authority to see to the municipalities' effective execution of their functions.

The Free Basic Water Policy (FBW) was introduced in 2001 as part of the government's decentralisation strategy of the water services from the national to the local government sphere to fulfil the Constitutional right of access to water services. The Policy was introduced to ensure that even poor households have access to basic water services. It allows for every household to receive 6000 litres per month. This is calculated at 25 litres per person per day in a household of eight people. This amount is a basic minimum that

all municipalities and water services providers should provide to citizens. Municipalities are given the choice of how they can implement the Policy depending on the availability of resources within the designated municipalities. This seems to be one of the key limitations which makes it challenging to successfully implement this Policy. According to Hall et al. (2006), the success of the Policy in municipalities depends on how sustainable the chosen implementation technique will be after it has been implemented. While Earle et al. (2005) further claim that the success of the FBW scheme does not only depend on the type of the implementation technique, it is highly dependent on the implementation of effective metering, monitoring, leakage detection and control, billing and credit control. These factors entail the municipalities to have a high degree of capacity, yet, this is often lacking in many municipalities (Earle et al., 2005; Hall et al., 2006).

In the case of informal settlements where the use of water metres is not viable, Hall et al. (2006) argue that the most common form of service level targeting is the communal tap system. As specified by Muller (2008) that under the FBW Policy communal standpipes are to be installed in communities where there are mainly poor people as mechanisms of limiting water supply. As per the Policy, the standpipes are to be installed within 200 metres from every home without water on-site. However, communal standpipes are usually installed more than 200m away from the dwellings, along road servitudes and often at inconvenient locations on the perimeters of the informal settlement (SERI, 2018). As a result, Hall et al. (2006) argue that the FBW Policy has failed in reaching areas that are most in need such as informal settlements, where women struggle the most in terms of water access, instead the Policy has reached more of the non-poor. Hence, there have been changes made to the Policy to only supply indigent families who cannot afford to pay for water with FBW (CoGTA, n.d).

4.7 White Paper on Basic Household Sanitation, 2001

While the FBW Policy was introduced for water services in 2001, for sanitation services the White Paper on Basic Household Sanitation of 2001 was introduced. As stipulated in the White Paper on Basic Household Sanitation that sanitation is a basic human right thus, the government is obligated to create an environment that allows all South Africans

to have access to basic sanitation services (DWAF, 2001). The White Paper on Sanitation defines sanitation as

> the principles and practices relating to the collection, removal or disposal of human excreta, household waste water and refuse as they impact upon people and the environment. Good sanitation includes appropriate health and hygiene awareness and behaviour, and acceptable, affordable and sustainable sanitation services (DWAF, 2001, p. 5).

According to the White Paper on Sanitation the factors that affect the impact of sanitation systems and water quality on the environment include the size and density of the settlement being served. Other factors include the sensitivity or class of the receiving water resource, type of sanitation system, the capacity of the service provider to manage the system, and the depth to groundwater and the soil type (DWAF, 2001).

The Policy further stipulates that for communities to determine the available sanitation options, they need to understand and recognise the need for adequate sanitation. For the households to gain satisfaction regarding sanitation they need to understand the link between their health, good hygiene and toilet facilities. The White Paper on Basic Household Sanitation further encourages communities to actively participate in projects relating to sanitation in their communities.

However, the White Paper on Basic Sanitation has been criticised for adopting a more demand-driven approach which serves as a limitation for sanitation access, especially for households residing in informal settlements. As argued by Tissington (2011) a demand-driven approach encourages direct contribution by each household to the construction of the sanitation facilities. Given the poor nature of households residing in informal settlements contributing towards sanitation facilities is a challenge and it is not feasible. Furthermore, SALGA (2008) highlights that another key limitation to the White Paper on Basic Household Sanitation is that it is rooted more in supporting households around sanitation services such as; provision of toilets, educating communities around operations, maintenance and hygiene improvements. After providing the support

households are left to deal with their sanitation needs on their own. Additionally, other challenges are emerging in the current municipal era which are not addressed by the White Paper. Some of these challenges are around questions of availability and distribution of capital funds for household toilets in settlements scheduled for relocation or will the funds be available for redevelopment within two or three years of the settlement or will the funds be used where health risks outweigh environmental contamination hazards (SALGA, 2008).

4.8 Strategic Framework on Water Services, 2003

Following the FBW Policy and the White Paper on Basic Household Sanitation, the Strategic Framework on Water Services was introduced in 2003. The 2003 Strategic Framework for Water Services aims to put forward the South African water sector's vision and to further develop a framework that will assist the water sector to achieve its vision.
The Strategic Framework specifies that the provision of basic water and sanitation for all is at the top of the water ladder. Loughnan et al. (2017) outline four steps up the water ladder. At the bottom of the ladder is access through surface water, which is drinking water directly from a river, dam and lake or irrigation channel. The next step up the ladder is unimproved access, this entails drinking water from an unprotected dug well or unprotected spring. The following step up the ladder is limited, this step involves accessing drinking water from an improved source where collection time exceeds 30min for a roundtrip including queuing. This step is followed by basic, which translates in drinking water from an improved source with the collection time less than 30min for a roundtrip including queuing. The highest step on the ladder is safely managed, which mainly includes drinking water accessed from an improved water source which is located on the premises, available whenever needed and is free from any contamination.

The Strategic Framework acknowledges that the highest step on the ladder is the most important process and priority and affirms that government will provide enough funds to ensure that this is achieved. National government will further increase its commitment of distributing funds over time to support households to step up the water ladder (DWAF, 2003). Water services authorities are expected to assist communities in ensuring that

they step up the ladder to achieve higher service levels. This should be done in a manner that does not compromise the priority of achieving universal access to basic water and sanitation. The Strategic Framework further affirms that in future the basic levels of water service will be reviewed to consider increasing them from 25 to 50 litres per person per day.

Moreover, the Strategic Framework highlights that water service providers have the responsibility of delivering water services in close relation with the specifications provided in the Constitutions and the Water Services Act. Water services providers should further ensure that water services delivery is in close relations with the by-laws of the water services authority and in terms of any specified terms that are set by the water services authority in a contract. Additionally, water services authorities are obligated to ensure that all the population that reside in their area of jurisdiction have access to at least the basic levels of water and sanitation services.

Furthermore, as per the Strategic Framework women often bear the burden of absent or poor water services this is the reason why they are perceived as key stakeholders in the water sector. The Strategic Framework acknowledges that men and women are affected differently by water and sanitation challenges. Hence, the water sector will create an enabling environment for women to play a meaningful role at all levels in consultations, planning, decision making and, the operation and management of water services (DWAF, 2003).

The Policy further stipulates that the provision of water and sanitation services to people residing on land illegally poses a challenge to water services authorities. Water services authorities are advised to pursue ways of addressing the security of tenure issues further. Meanwhile, basic water and sanitation should be provided to the land occupants temporarily as appropriate, affordable, and practical by a progressive plan that addresses both land tenure and basic services.

Additionally, the Strategic Framework defines a basic sanitation facility as a sanitation infrastructure that is safe, reliable, private, protected from the weather and ventilated, keeps smells to the minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease-carrying flies and pests and enables safe and appropriate treatment and/or removal of human waste and wastewater in an environmentally sound manner (DWAF, 2003). While basic sanitation services are defined as sanitation facilities that households can easily access. This includes the safe removal of human waste and wastewater from the sites where the facilities are located and the communication of good sanitation hygiene and related practices (DWAF, 2003).

The Strategic Framework applies a more supply-driven approach that emphasises sustainable servicing by municipalities. While the White Paper on Basic Household Sanitation of 2001, promoted a more demand-driven approach to sanitation which focused on measures to ensure that households are equipped to maintain and service their toilets themselves. According to Tissington (2011), this has resulted in two broad approaches to sanitation services being implemented. The first one is a demand responsive approach which is aligned to the White Paper on Basic Household Sanitation 2001 and is mainly implemented in rural areas. The second approach is the supply driven approach which is mainly implemented in urban areas.

SALGA (2008) argues that while the demand driven approach had some limitations as highlighted in this chapter under the White Paper on Basic Household Sanitation, the supply driven approach also had limitations as it was not guided by any national sanitation framework. Furthermore, Mjoli (2010) claims that international experience regarding supply driven sanitation provision programmes lead to unsustainable sanitation services. This is caused by the issue that the programmes focus more on toilet construction without considering hygiene education, community mobilisation and meeting sanitation demands of the communities the facilities are provided in. Thus, in South Africa, the approach in the Strategic Framework for Water services has resulted in cost recovery crises, service failures, environmental contamination and a growing risk of disease outbreaks (SALGA,

2008). Moreover, SALGA (2008) argues that it has been challenging reconciling these two approaches, and this has further highly complicated the eradication of service backlogs and the provision of sustainable services.

4.9 Mainstreaming Gender into the Water Services Sector National Implementation Strategy and Action Plan 2006-2010

The 2006-2010 Mainstreaming Gender into the Water Services Sector National Implementation Strategy and Action Plan was introduced to provide guidelines. Such guidelines are aimed at ensuring that suitable planning and implementation of gender mainstreaming programmes, projects and activities at all spheres of government are done in an incorporated, consistent and sustainable way. Furthermore, the strategy aims to provide guiding mechanisms that emphasise policy formulation, transformation, communication, capacity building, management, resourcing, research and evaluation. As a result, the strategy develops strong grounds on which stakeholders can holistically mainstream gender into the Water Services Sector (DWAF, 2006).

Furthermore, in support of the participation of women in the water sector the Policy insists that water management structures should be made up of a total of 50% of women. Moreover, one of the drivers of the Policy recognises that the Water Services Sector plays an important role in ensuring that the use and management of water promotes sustainability of the quality of life and poverty alleviation. This is achieved through access to basic water services which in turn reduces the workload for poor women and young girls by ensuring improved health through reduced vulnerability to sanitation-related diseases. The Policy further emphasises that the role of women must be understood not only from the human rights perspective but also in terms of the practical application of gender equality, equality of opportunity and equality of treatment.

As further recognised by the Policy that in most communities women are responsible for collecting, managing and for using water for domestic purposes and for ensuring the provision of sanitation services. Women are often caregivers for their families and members of the community who are aged, ill and requiring health care assistance. Hence,

women are usually the best people who have relevant information regarding availability, hygiene issues, reliability and purity of water. Thus, it is important to consider the role of women not only as end-users but as well as a resource in terms of Policy, decision making, supply mechanisms and maintenance. The Policy further argues that at all levels of project gender mainstreaming has to be applied, this ensures that gender-specific issues are identified in the analysis of programmes and projects and are subject to specific interventions whenever appropriate.

4.10 Free Basic Sanitation Implementation Strategy, 2009

The Free Basic Sanitation Implementation Strategy is informed by the Free Basic Services Policy of 2001 and the Strategic Framework for Water Services of 2003. The Free Basic Sanitation Implementation Strategy recognises that poor households are eligible to be provided with free basic sanitation and that municipalities should ensure that such households are not denied access to sanitation due to their inability to pay for such services.

Access to sanitation includes the capital payments relating to the installation of the facility, rehabilitation costs and ongoing payments of tariffs relating to the provision of the service (DWAF, 2009). Furthermore, the Policy specifically claims that some on-site components of the facility will be the responsibility of the households and where the cost of providing free basic sanitation to the poor exceeds the subsidy amount available, cross-subsidisation should take place, where wealthier users cover all or some of the cost of providing the service to poor users.

Moreover, as per the policy in urban dense informal settlements the required sanitation type would be waterborne sanitation systems. However, this form of sanitation can only be installed if it is financially viable and if it has been tested that the amount of water needed for flushing will be available. Thus, while in some areas the basic service level could be a Ventilated Improved Pit latrine (VIP), in urban and well-established areas waterborne sanitation could be the basic service level to be provided free to the poor. Furthermore, the Policy stipulates that in areas and households where waterborne toilets

are installed 15 litres of water per person per day should be provided. This translates to 3 to 4 kilolitres for a household of 8 (DWAF, 2009). Additionally, regarding health and hygiene education and awareness should be offered and households are required to participate in the awareness process. Municipalities are further given significant freedom to determine how to go about achieving access to basic sanitation, depending on geography, demographics, income distribution and institutional capacity.

The Policy further claims that in informal settlements where the municipality cannot provide permanent services, temporary forms of sanitation services such as VIPs can be provided. The Policy does not support the implementation and use of temporary sanitation arrangements such as the bucket system and chemical toilets.

However, as argued by Tissington (2011) that one of the major limitations of the Free Basic Sanitation Implementation Strategy is that it provides little guidance on the sanitation issues of informal settlements located on private land. The Policy is further criticised for being deliberately vague when it comes to outlining the concept of “free” and this has major limitations on sanitation provision. This is problematic mainly in poor informal settlements as municipalities are given the freedom of having their interpretation of the word (Tissington, 2011).

4.11 National Sanitation Policy, 2016

In realisation of the need for a revised sanitation Policy to accommodate the changes, prioritisation and the gaps in sanitation delivery since 2001, the National Sanitation Policy was introduced in 2016. Thus, the 2016 National Sanitation Policy Review provides Policy positions to address the gaps and challenges of the South African sanitation Policy by taking into account the new national and international development imperatives (DWS, 2016).

According to the Policy, sanitation provision is highly dependent on the arrangement in which people have settled. This ranges from high rise, high density settlements which are mainly informal settlements found in urban areas. Thus, with such different and often

complex settlements, sanitation is often provided as part of a package of municipal services associated with housing, including water supply and roads. As per DWS (2016) providing water and sanitation services in informal settlements is one of the biggest challenges facing the DWS. According to the 2016 National Sanitation Policy, it is difficult for local government to provide basic services to informal settlement dwellers due to insecure tenure which is a defining requirement for the provision of services in their jurisdiction (DWS, 2016).

Yet, the policy stipulates, that interim basic sanitation services, which are appropriate, affordable, and practical following a progressive plan that addresses both land tenure and basic services should be provided in temporary informal settlements. In a permanent informal settlement, the Policy obligates, local government to ensure access to basic sanitation services. All sanitation services in informal settlements should be provided in consultation and participation with the designated communities (DWS, 2016). Moreover, the Policy makes sanitation services provision for people who are placed in temporary relocation camps due to evictions or displacements. Using the Joe Slovo informal settlement case judgement in Cape Town, the Policy argues that sanitation facilities in temporary relocation camps should be situated within reasonable proximity of the community. Furthermore, reasonable provision for sanitation facilities should be made, which may be communal with waterborne sewerage and make reasonable provision for freshwater (DWS, 2016).

Section 7.1 of the 2016 National Sanitation Policy speaks to issues of the appropriate type of sanitation technology to be installed in specific areas. As per section 7.1 of the Policy the type of settlement and settlement patterns have important implications on the type of suitable, affordable, and sustainable sanitation technology. In South Africa currently, suitable sanitation for an area is chosen based on guidelines for service levels in the country, with flush systems being the main sanitation technology type installed in informal settlements (DWS, 2016).

Additionally, the 2016 National Sanitation Policy outlines the importance of hygiene education during the implementation of basic sanitation services programmes. According to the Policy hygiene education on sanitation should take place throughout the implementation phase, this includes a visit during household pre-construction, during construction and after construction of the sanitation facility (DWS, 2016). The Policy further acknowledges the importance of community participation which involves the community and local leadership structures in all aspects of the hygiene education programmes to ensure their relevance and acceptability (DWS, 2016).

Moreover, the Policy recognises women as central in the provision, management and safeguarding of sanitation services. As such the Policy claims that the specific sanitation needs of women should be considered. This includes providing physical sanitation access that is safe and which takes into account women's dignity and the design and location of sanitation facilities that consider the needs of women and vulnerable groups. The Policy further, encourages a gender-balance approach in sanitation plans and sanitation services provision, using local women organisations in the operation and maintenance of sanitation services is further encouraged. Forged partnerships between local government, local women's groups and the private sector are encouraged to deal with the technical and financial barriers associated with urban women's sanitation access. As such the Policy encourages the integration of women into existing sanitation development processes by targeting their needs. Last, the Policy claims that sanitation services must be provided to be safe, accessible, hygienic and appropriate for disabled and vulnerable individuals.

However, as argued by SAHRC (2018) that the key weakness of this Policy is that it fails to explicitly observe sanitation as a human right to which everyone is entitled. "This is contradictory to international pronouncements and South African jurisprudence" (SAHRC, 2018, p. 12).

4.12 Implications of the policy changes on gender in water and sanitation services delivery in South African informal settlements

While the policy gaps have affected water and sanitation services delivery in informal settlements, the challenges that persist at the local government level further worsen water and sanitation provision in such settlements. Motsoeneng (2016) argues that though the right to sufficient water and sanitation access is entrenched in the South African Constitution, so far the South African democratic state has not provided significant improvements in water and sanitation access to informal settlements. When water and sanitation were decentralised in the early 2000s this saw local government not just being an administrative arm of the national and provincial government, but an equal partner in the governance of water services (de-Visser, 2007). South Africa has eight metropolitan cities, 44 district municipalities and 226 local municipalities (CLGF, 2017). All these types of municipalities have a core responsibility for water and sanitation services delivery. As a result, local government has a developmental obligation to ensure that the communities it serves are part of the process in defining what a suitable approach would be for the local sphere to achieve its mandates.

However, the decentralisation approach has resulted in challenges in local government, which have affected policy implementation and the overall water and sanitation services delivery to informal settlement communities. Powell (2012) perceives the challenges of local government as shaped by the design and impact of policy. Modimowabarwa (2014) argues that as much as the decentralisation process happened at the right time the transformation and policy development of the other two spheres of government surpassed local government. Consequently, when the decentralisation process was implemented in the early 2000s the vision was already surpassed by hard political and economic realities, overwhelmed by the scale of institutional changes involved and the distance between the ideal and delivering practical change (Powell, 2012).

Moreover, Schreiner (2013) argues that municipalities further face challenges that result from the lack of administrative and technical capability to implement the water and sanitation policies. These views are further supported by SALGA (2013) which argues

that in South Africa municipalities are struggling to provide water and sanitation services in informal settlements due to lack of funding and lack of institutional capacity. In fact, 130 out of 284 South African municipalities need support to meet their minimum obligations (Ramírez et al., 2019). Nyamukachi (2005) blames politics at local government for the failures of the decentralisation process and the unsuccessful implementation of water and sanitation policies thus, ensuring improved water and sanitation services delivery to informal settlement communities. Reddy (2016) defines politics as politicians aspiring to gain more political power and to retain the power that they already have over communities within a specific jurisdiction. Additionally, Thornhill (2012) clarifies that politics refers to more than just party politics but it includes a wider decision making process, that has to do with questions relative to who receives what, when, where and how in terms of service delivery at the local government level.

Political parties at municipal level use their political powers and influence to determine how and where services are delivered. As a result, Nyamukachi (2005) argues that local party politics directly affects the functioning of the municipality, especially when more than one political party holds power in a municipality. Each political party has its policies, plans and political interests which it aims to implement and achieve within the municipality. This results in the different political parties competing for power at the municipal level, and the competition affects how municipal policies are implemented and how water and sanitation services are delivered (Masuku & Jili, 2019). Okecha's (2010) study highlights how these factors play out at the community level. The scholar claims that the conflicts between the political parties that hold power particularly in the CoCT, result from differing agendas about governing the municipality. This further affects how policies are implemented and services delivered especially in poor informal communities (Okecha, 2010). Thus, Masuku and Jili (2019) claim that politicians serving at the municipal level should ensure that they separate their responsibilities of being political party members and those of being public servants. Failing to separate these two roles interferes with how municipalities are operated and how policies are implemented.

Moreover, conditions are worse when it comes to the inclusion of gender in water and sanitation policy implementation by municipalities in informal settlements. As much as national water and sanitation policies acknowledge and highlight key areas of gender at a policy level, SAHRC (2014) argues that there is an unwillingness to prioritise local level gender concerns by municipalities in South Africa.

> Municipalities and provincial water boards have not created their own internal policies on gender equality, and lack the necessary processes and structures which institutionalise gender mainstreaming. In terms of the national policies and where any gender water and sanitation policies have been formulated at local level, they had not been fully implemented due to lack of will, capacity and prioritisation (SAHRC, 2014, p. 64).

Scholars such as (Bénit-Gbaffou, 2008; Jolobe, 2014) perceive key failures associated with local government political structures as the main challenges that negatively affect the decentralisation process. These structures are criticised of being part of the interferences in ensuring that gender-sensitive water and sanitation services are delivered to informal settlement communities. In preparation for the decentralisation process, political structures were created to establish a participatory form of service delivery. These included spheres of representation at the ward level inclusive of ward committees and ward councillors for main category A and category B municipalities as outlined in the Municipal Structures Act 117 of 1998 (Sekgala, 2016). Section 23 of the Municipal Structures Act makes provision for the creation of ward committees and Sections 17-21 of the Municipal Systems Act 32 of 2000 describe in detail how the ward committees can participate in local governance (RSA, 1998; RSA, 2000).

Section 2 (b) of the code of conduct for ward councillors in the Municipal Systems Act, claims that at all times ward councillors should act in the best interest of the municipality and in such a way that the credibility and integrity of the municipality are not compromised (RSA, 2000). Paradza et al. (2010) emphasise that ward councillors also have the responsibility of being watchdogs, by ensuring the municipalities implement policies to address the needs of citizens. As such, ward councillors and ward committee members

are more accountable to the community who elected them. If the ward councillor is found guilty of acting unethically or in breach of the code of conduct, the municipal council or a special committee is responsible for taking the necessary steps to reprimand the councillor (RSA, 2000).

However, ever since the introduction of these structures in municipalities questions have been raised regarding their roles in assisting informal settlement communities in achieving access to gender-inclusive water and sanitation services. According to Jolobe (2014)

> despite the transformation of the local government regime in South Africa with the de-racialisation of municipal jurisdictions, the introduction of developmental local government, the substantial allocation of financial resources to the municipal level and the introduction of the new local government with ward councillors and ward committees the system has failed to live up to its expectations (p.1).

Bénit-Gbaffou (2008) further argues that these failures are shown by the levels of urban protests over service delivery including water and sanitation, which mainly take place in informal settlements. Ward councillors have been placed as targets of such protests since they are relatively absent from the public scene as far as municipal decisions and debates are concerned (Bénit-Gbaffou, 2008). This sense of neglect is further proven in a study conducted by Paradza et al. (2010) in different municipalities around South Africa where community respondents were asked how often they had been contacted by a range of public representatives during that year. More than 72% of the respondents reported that they had never been contacted and a further 10% reported being contacted only once by their local councillor. These levels of neglect persist in poor communities even today. Thus, water and sanitation facilities accessed by women in informal settlements continue to lack gender-inclusive measures that ensure their safety is well maintained and can manage their menstruation needs comfortably and with dignity (SAHRC, 2014). Moreover, Kanniah (n.d) argues that having local government structures in place means nothing if they do not perform their duties. Good governance is not measured on the existence of the structures or the processes through which they are developed it is

measured on their performance and outcomes (Kanniah, n.d). As a result, informal settlement communities perceive these power structures as governmental structures which are far away from the issues faced by the general communities on the ground (Paradza et al., 2010). Instead of working hand in hand with informal settlement communities to improve the living conditions in such areas, communities perceive ward councillors as corrupt and neglectful many poor communities have no trust for these governmental representatives.

4.13 Conclusion

In conclusion, while substantial progress has been made in transforming an apartheid state with access to basic services that were based on racial segregation into a democratic one, there have been complexities that continue to challenge the transition. This chapter showed how the water and sanitation policy environment after 1994 was mainly centralised and how this approach did not reach the more marginalised groups including poor women residing in informal settlement. As such, in the early 2000s a more decentralised approach was introduced to encourage more participatory governance. However, as presented in this chapter that the limitations in the policies that were introduced when the decentralisation was implemented and the challenges at the local government level form part of the key causes of poor water and sanitation provision and the unsuccessful implementation of gender in water and sanitation policies in informal settlements.

CHAPTER 5
INSTITUTIONAL ARRANGEMENTS WITHIN WHICH WATER AND SANITATION ARE ACCESSED IN QQ SECTION AND MARLBORO SOUTH

5.1 Introduction

This chapter presents an outline of the institutional arrangements within which water and sanitation services are accessed in both QQ Section and Marlboro South informal settlements. This chapter aims to show how each of the institutions in both settlements has affected water and sanitation services. The chapter is divided into three broad sections. The first section deals with the QQ Section case study, the second section deals with the Marlboro South case study and the third section gives a comparative analysis of the institutional conditions in both settlements.

Both the first and second sections begin with outlining the characteristics of the household respondents in the two case studies. Furthermore, the second parts outline the institutional dynamics, where the background information, duties and relations of each of the institutions in each of the settlements. Additionally, under each case study, this chapter highlights how the institutions have shaped water and sanitation access. Given these discussions, the third section gives a comparative analysis of the key themes that emerge from both cases of how the institutional arrangements have affected water and sanitation access in the case studies.

QQ Section case

5.2 Characteristics of respondents: QQ Section

Presented below is a simple table outlining the socio-economic background of respondents in QQ Section. As shown in Table 3, out of the 40 interviewed household respondents 70% reside in women single-headed households while 25% reside in men single-headed households translating to 95% of the respondents residing in single-headed households. Out of the 70% households single-headed by women 53% have children.

Table 3

Summary of the Socio-economic Background of Respondents: QQ Section

Gender of the head of household	70% women single-headed/ 53% from the 70% have kids 25% men single-headed 5% men and women-headed (spouses)
Employment status	43% no one employed in the household 57% someone employed in the household
Household sizes	48% have 4-7 household members 43% have 1-3 household members 9% have 8 and above members

Even though 57% of the respondents reside in households where there is at least someone employed, the common types of jobs found in the QQ Section as per the study respondents are; domestic workers, gardeners, store packers and cleaners with an income average of R2500 per month. The income is reported to be insufficient to cover the needs of 4-7 household members, which make up majority of the household sizes for the study respondents who come from QQ Section, as shown on Table 3. The situation is more difficult in the households with kids, which make up 53% of the 70% of women single-headed households. The kids have other extra needs such as school for the older kids and diapers and baby food for babies and toddlers.

As a result, all these factors carry financial, social and emotional burdens on women in the settlement. Additionally, these factors are reported to further affect the women's presence and participation in the community committee and community-based projects. According to the community committee leader, as much as the women in QQ Section are

involved in community matters, many have stepped down from being actively involved in the community committee due to their work loads. This further affects positive changes which women can inflict in matters concerning water and sanitation services which are a huge challenge in the settlement.

5.3 Institutional dynamics in QQ Section

There are several institutional power structures, formal and informal which influence the everyday life of the informal settlement and in turn the access to water and sanitation services. Concerning water and sanitation services, the institutions are meant to assist informal settlement communities by improving the often dire conditions of water and sanitation access in the settlements. The main institutional power structures which have affected water and sanitation conditions in QQ Section are the QQ Section community committee, SANCO, ABM, ward Committee and the ward councillor and the CoCT Metropolitan Municipality. One of the organisations which have tried to work with the settlement concerning sanitation services but have never been offered the chance to do so is the Social Justice Coalition.

The background information and the relations between these institutions and how they have affected water and sanitation in the QQ Section is outlined in the following sections of this chapter.

QQ Section community committee

The QQ Section community committee is the first institutional power structure that operated in the settlement. The community committee is an informal community structure that was formed by the community in the late 1980s when the settlement was relatively new. The structure consists of fourteen portfolios filled by members that are annually elected. The current structure had six women serving in it, however, four of the women are no longer actively involved in the community committee due to daily household obligations they must attend to. All the members are selected according to their work ethic and activeness in community-based projects. Furthermore, a person can serve more than once in the community committee depending on the community's votes and how well the

person fulfils his/her responsibilities. The duties of the community committee mainly include taking the community grievances and service delivery issues forward to the higher power institutions. The relationship between the community committee and the other power institutions is that the community committee is an independent informal structure that serves as the voice of the community when taking grievances forward to the Ward Committee, Ward councillor, municipality and any other structure that wants to work with the community.

Additionally, the community committee currently administers the buying and selling of land and shacks in QQ Section. A person wishing to sell their shack formally applies through the community committee. After finding a buyer, the committee performs a thorough background check on the prospective occupant. The buyer is only welcomed to occupy space in the area if their record is clean. Due to the overcrowded nature of the area and lack of land space, the community decided in 2010, not to allow new people from outside QQ Section to construct new dwellings in the settlement. Outsiders can only buy an already existing shack from someone moving out of the settlement. The community committee has a list of people who are eligible to construct a dwelling in the area and these are mainly young adults and the youth who grew up in the area and are still residing within the settlement who wish to have their own private space. Furthermore, no one can rent out any dwelling in the settlement.

While these rules are meant to deal with overcrowding, they are also meant to assist in dealing with criminal activities in the area by only allowing people who grew up in the settlement and are known by the community to construct a dwelling in the area. Yet, it seems as if the occupants in QQ Section have found ways to by-pass these rules by bringing in friends and extended family members from outside the settlement and allowing them to stay in the main household shack. After a few months they permit these new occupants to construct their dwellings in their backyards. Even though the community committee has a list of people who are eligible to construct dwellings in the settlement, they find this dishonest behaviour a challenge as they claim that once a shack has been

constructed it is difficult to demolish it. This is reported as one of the major contributors to the crime rate in the settlement.

South African National Civic Organisation (SANCO)

The second institutional power structure which has had an impact on the status of water and sanitation services in QQ Section is SANCO. SANCO is a civil society organisation that was formed in 1992 and it represents +/-4000 local branches (Heller & Ntlokonkulu, 2001). As per its Constitution, the organisation pledges to ensure it commits to a unified, democratic, non-sexist, non-racist, non-exploitative South Africa based on the rights and values enshrined in the Bill of Rights of the Constitution of the RSA (SANCO, 2001). Furthermore, the Constitution of SANCO clearly states that SANCO is a non-political organisation as such it is an independent organisation that is not politically affiliated (SANCO, 2001). However, reports show that SANCO is one of the main alliances of the ANC (Seekings, 1997; Stadler, 1997; Zuern, 2004). Thus, this makes SANCO in the QQ Section informal settlement to be in close relations with the ANC political party and the Ward 89 councillor. The organisation's Constitution claims that SANCO was founded by South African residents and it is founded on the basic needs, desires and expectations of the masses of the people. Its slogan is people-centred and people-driven (SANCO, 2001).

Abahlali baseMjondolo (ABM)

The third institutional power structure to work with the community of QQ Section was ABM. ABM is a CSO that is grassroots oriented, consisting of shack dwellers and impoverished members. According to Pithouse, (2009) ABM was formed in 2005 with its headquarters based in Durban. Over the years, ABM has seen a growth with other branches opened in the Western Cape in 2007, in the Eastern Cape in 2017, and with branches opened in Gauteng and Mpumalanga provinces in 2016. As part of its mandate ABM aims to assist informal settlement dwellers with acquiring mainly land and housing as well as ensuring that informal settlement dwellers have access to basic services including water and sanitation services (Kienast, 2006). Communities who want to be members of ABM are expected to pay yearly membership fees which were R30 per

person in 2019. At least 50 people from one specific settlement should be willing to join the organisation for the organisation to be active in that settlement.

Once a community becomes a member of the organisation it is allowed to select people that will serve the community under ABM within that specific community branch. Induction and training are carried out with the chosen individuals regarding how they should conduct themselves and how to handle community and donor funds.

Additionally, after the induction and training the community is assisted to open a bank account that is managed by three signatories mainly the chairperson/leader, treasurer and secretary of the community branch. The headquarters of ABM in Durban does not actively oversee the management of the other branches' accounts, only the three selected signatories from each of the relevant branches manage the accounts.

ABM in QQ Section worked in close relations with the old QQ Section community committee structure and had no relations with any of the other institutional structures that worked in the settlement.

Ward committee and ward councillor

The fourth institutional power structure in QQ Section is the ward committee including the ward councillor. These structures were introduced in 1999 in South Africa and they are voted into power in the local government elections by the various communities which fall under a specific ward (DPLG & GTZ, 2005). According to the ward committees' code of conduct, members of the committee are elected to represent the interest of communities within a specific ward and report on matters affecting the ward to the municipality through its ward councillors and in agreement with the processes determined by the relevant municipality (SALGA, 2016).

In QQ Section the ward committee is meant to work in close relations with the QQ Section community committee, the ward councillor and the CoCT. The ward committee's duties are to ensure that the settlement has access to basic services and it further has the

responsibility of listening to the grievances bought forward by the QQ Section community committee on behalf of the settlement. The ward committee reports the issues faced by QQ Section to the ward councillor. The ward councillor is meant to report the community's grievances to the CoCT municipality. Furthermore, given that the Ward 89 councillor in QQ Section is an ANC councillor, this makes Ward 89 an ANC administered ward. Thus, in this instance, even though Ward 89 is ANC administered, the ward councillor still has to report to the CoCT which is under the DA administration and the CoCT holds the responsibility of ensuring that the Ward councillor performs its duties well and is held accountable when need be.

City of Cape Town Metropolitan Municipality (CoCT)

The fifth institutional power structure that has shaped water and sanitation conditions in QQ Section is the CoCT. The CoCT as per its Constitutional obligation and the Water Services Act 108, has the responsibility of ensuring that all the people under its area of jurisdiction have access to basic water and sanitation services. Within its by-laws, the CoCT municipality states that it is responsible to ensure that at least one tap should be provided to 25 families within a range of 100m. The taps should be placed in the road reserve if the land is not owned by Council. Furthermore, as per the by-laws, one toilet provision to a ratio of five households should be provided. The type of sanitation is dependent on whether a sewer main is nearby or not. If the settlement is close to a sewer main a waterborne system can be installed. For settlements that not close to the sewer main temporary chemical toilets, portable flush toilets, with twice per week waste removal services by the municipality should be placed in the settlements. As such to achieve its service delivery obligations in QQ Section the CoCT needs to work closely with other local government structures such as the ward committee and the Ward councillor as these are the main structures closest to communities. Even though the CoCT is DA administered it holds the responsibility of ensuring that all areas under its jurisdiction including QQ Section which is an ANC led ward has access to water and sanitation services.

Moreover, as highlighted in this chapter in the section dealing with Ward Committee and Ward councillor the CoCT is further responsible for ensuring that local government

structures such as ward councillors and ward committees perform their duties to the best of their ability. In situations where such structures fail to do so, the CoCT has to hold them accountable.

Social Justice Coalition (SJC)

SJC is the sixth institutional power structure that has shown interest in working with QQ Section. SJC is a CSO that is based in Cape Town, it was established in 1998 and aims to uphold the Constitutional rights to life, dignity, equality, freedom and safety for all especially informal settlement dwellers. SJC assists informal settlements with mainly sanitation access and its campaigns are research, education and advocacy-based.

SJC is funded by various donors nationally and internationally. In QQ Section, SJC had the interest to work with the settlement in ensuring that the CoCT upholds its Constitutional obligation of providing sanitation services to the settlement. Presented on Figure 3 is the summary of the institutional arrangements in QQ Section.

Figure 3

Summary of Institutional Arrangements in QQ Section



5.4 Role of the institutional arrangements in shaping water and sanitation services in QQ Section

The study participants highlighted that in the late 1980s to early 1990s, to occupy land and construct a dwelling in QQ Section, consultation had to be made with the chief who sold land stands illegally for R25 per stand. However, the community had problems with his leadership style, he was alleged to be creating chaos and hostility within the community and was banned from the community in the early 1990s. The area that was originally called Tambo Park was renamed QQ Section by the community, since it is situated adjacent to a formal area called Q Section. Given that the land occupied by QQ Section was illegally invaded, as previously highlighted in the background of the settlement in the methodology in chapter 3, the settlement had no form of basic services. Due to these conditions, the household respondents claimed that the community joined SANCO in the early 1990s to get assistance with access to basic services. SANCO was the main CSO during that era that was believed to serve and assist marginalised communities. The household respondents, the QQ Section current community committee leader and the former ABM employee argued that SANCO undermined all grievances from informal settlement communities. Instead the organisation considered grievances of formal communities. This resulted in the QQ Section settlement withdrawing its membership from the organisation in the late 1990s.

Additionally, with the disappointment the community encountered from SANCO, in its community committee elections in the year 2000, the community elected a new leader who will be referred to as Mark for the sake of this study. The household respondents and the current QQ Section community committee leader claimed that Mark as the previous community committee leader was very effective in the beginning. Under his leadership, during a service delivery protest that he organised in 2005, he was able to capture the attention of the then National Department of Housing (DoH) minister. According to the QQ Section current community committee leader, seeing the violent nature of the protests, which were further captured by media, the then minister of the DoH promised to relocate QQ Section to suitable land in an area called Bardale, next to Emfuleni. This promise was made on the basis that the land the settlement is situated on is unsuitable

for development and the installation of water and sanitation infrastructure. Due to the promise, the protest demonstrations stopped with the hope that the settlement will be relocated. However, this promise was never fulfilled.

The household respondents shared that in 2007 Mark advised QQ Section to join ABM, as the organisation that will assist the community with securing suitable land. The settlement would be relocated to the new land, for it to have proper access to basic services, such as water and sanitation. The National ABM leader shared that the settlement selected Mark as its ABM branch leader, after the settlement joined ABM in 2007. The National ABM leader claimed that Mark was further selected as the Western Cape provincial ABM leader by the ABM headquarters, and the first ABM Western Cape provincial offices were opened in QQ Section. This meant that Mark held three positions, he was the QQ Section community committee leader, ABM QQ Section branch leader and the ABM Western Cape provincial leader.

According to the household respondents and respondents from the focus groups, in the early stages of his tenure Mark was effective in assisting QQ Section, he assisted the settlement to secure the first four standpipes in 2008. However, before one year ended with Mark holding the three power positions, the household respondents claimed that he became greedy while he was handling the donor funds. He started using donor funds for his personal gain, and made decisions on behalf of the community without any consultation. To cover his financial misconduct, he started to develop an aggressive leadership style that was associated with violence against community members that wanted to question his behaviour. The household respondents and respondents from the focus groups shared that Mark physically assaulted any community member who disagreed with him in community meetings, including women. The household respondents and respondents from the focus groups further shared that Mark blocked the government and any other organisation that showed interest in working with the community. These allegations were further verified by one of the SJC representatives who shared how SJC tried working with QQ Section, and was constantly blocked by Mark

from entering and addressing the community. The current community committee leader, described Mark as a ruthless leader that only cared about his personal interests.

Furthermore, in 2009 the DA won the majority of votes and took over the administration of the Western Cape Province from the ANC. The then DA political party leader made the same promise that was made by the 2005 national department of housing minister that QQ Section will be relocated to Bardale. When the community was ready to relocate it discovered that Mark went to the municipality without consulting the community, and claimed that the community is no longer interested in relocating. As per the household respondents and respondents from the focus groups, the CoCT did not go to the community to verify if the information provided by Mark was true, the CoCT placed new people onto the land. This resulted in the QQ Section community forfeiting the land. This was confirmed by the CoCT DoHS official that the CoCT had to move other communities to the piece of land, since Mark who was the community committee leader told the municipality that the community was no longer interested in relocating. This demonstrates that the CoCT took the information from Mark as the truth, the municipality saw no reason to verify the information with the QQ Section community, since the information came from the community leader. As a result, the settlement was forced to remain on the piece of land on which the CoCT could not provide improved water and sanitation services.

The household respondents and respondents from the focus groups claimed that Mark was able to abuse his powers for three years in QQ Section without any support from the ABM headquarters. The ABM headquarters left the community was left without proper avenues, they could use to report Mark. No one from the community was brave enough to step forward and report him when donors visited the settlement, due to his violent behaviour. The settlement managed to ban Mark from the settlement in 2011, and elected another community committee leader. The household respondents and the respondents in the focus groups shared that after Marks's misconduct the settlement ensured it has guiding principles in place for the community committee and there are accountability mechanisms in place for representatives that disobey the guiding principles. The respondents further shared that the community is actively involved in the operation of the

community committee, and ensures that the committee gets its mandate from the community.

The lack of support from ABM in dealing with Mark's unethical behaviour was further maintained by the ABM headquarters' Durban leader, who claimed that it took the organisation too long to assist the community. He claimed that the organisation was unaware of Mark's behaviour until the organisation's representatives from the headquarters visited the area in 2012, to renew memberships for the community. He claimed it is difficult to monitor each ABM branch, due to the long distance between provincial branches and the headquarters. Mark was finally brought in front of the ABM disciplinary committee and was expelled in 2012. QQ Section remained members of ABM, the provincial offices were relocated to Sweet Home Farm and a new ABM Western Cape provincial leader was appointed by the headquarters.

After the abuse QQ Section endured from Mark a new ward councillor who will be referred to as Nick for the sake of this research, was voted into power in 2012 in Ward 89, which is the Ward QQ Section falls under. As per the household respondents, the election of the new ward councillor bought hope to the settlement that the area will finally have access to water and sanitation services. However, the household respondents, respondents from the focus groups and the current QQ Section community committee leader shared that ever since Nick was elected as the ward councillor in 2012 he has ensured that he never approves any projects related to supplying QQ Section with water and sanitation services. The marginalisation of the settlement by Nick was explained by the key informant who used to be part of ABM in the QQ Section branch and a close ally of the ward councillor as a way of teaching the settlement a lesson for removing their SANCO membership in the late 1990s. As per the informant's explanation, ever since the QQ Section community decided to withdraw its SANCO membership all ANC ward councillors were informed to never assist the settlement with service delivery.

Without the support of its ward councillor QQ Section depends on its community committee to fight for the needs of the settlement. As a result, when the settlement

realised that the ward councillor was blocking it from having water and sanitation provision the QQ Section community committee approached the CoCT to seek assistance regarding the ward councillor's misconduct. The household respondents and the current QQ Section community committee leader claimed that the CoCT told the community committee to report the ward councillor to the ANC, since he is an ANC ward councillor because CoCT is a DA governed municipality. No action had been taken against the ward councillor by the CoCT or by the ANC.

As further shared by the household respondents and respondents from the focus groups, in 2016 the community withdrew its membership from ABM after its realisation that ABM was not assisting it with its service delivery challenges. The household respondents and respondents from the focus groups further claimed that the community expected the organisation to be more active in assisting the community. As per the respondents, this would have been the organisation's way of showing remorse and taking accountability for Mark's misconduct in the settlement. However, the organisation neglected the settlement despite the settlement paying its membership fees, even after the abuse it endured under Mark and ABM as an organisation. The respondents claimed that ABM left them without fulfilling the promises it made of relocating the settlement or assisting the settlement with improved water and sanitation access.

According to the household respondents and the current QQ Section community committee leader, after multiple rejections from the CoCT regarding water and sanitation provision in the settlement, in 2016 the current QQ Section community committee leader saw CoCT employees installing standpipes in another informal settlement. He approached the employees and asked them for the correct approach to use to get the CoCT to supply QQ Section with taps. The employees advised him on the relevant approach to use for the CoCT to install taps in the settlement. As a result, the QQ Section current community committee leader and the rest of the committee members managed to convince the municipality to install communal standpipes in the settlement. According to the household respondents and respondents from the focus groups, even though there are standpipes installed, the standpipes supply insufficient water. The conditions are

reported to be worse during weekends when more residents are home, the taps are either dry or the water pressure becomes too low. The CoCT further fails to fix the standpipes when they are broken.

Additionally, in the 2016 local government elections QQ Section voted for DA with the hope that its water and sanitation services delivery conditions will improve if DA took over Ward 89. However, given that those other areas that fall under Ward 89 voted for the ANC councillor to be re-elected, the QQ Section votes were not enough to vote out the councillor. According to the household respondents, respondents from the focus groups and the current QQ Section community committee leader, after the elections Nick told the settlement that if it wants to have improved basic services from him as its ward councillor the settlement should re-join SANCO. In 2017 QQ Section re-joined SANCO with the hope that the settlement's living conditions would improve. Yet, after re-joining SANCO the household respondents and current QQ Section community committee leader claimed that nothing has improved in the area.

For the settlement to have toilets installed the community committee approached the CoCT council offices in 2017. The visit was one of several visits made in previous years with no positive outcome. According to the household respondents and current QQ Section community committee leader, when they previously visited the offices the CoCT officials would tell them that the settlement will not be provided with toilets or taps without the approval of the ward councillor. During the 2017 visit the QQ Section community committee was told the ward councillor was on leave, and they were assisted by the sub-council manager. The current QQ Section community committee leader claimed that when the sub-council manager heard their grievances he was saddened by the settlement's service delivery situation. As a result, he assisted the settlement to have the CoCT install communal flush toilets and four more taps attached to the toilets.

Unfortunately, like in the case of water the quality of the sanitation facilities does not meet the requirements of basic sanitation, as presented in the water and sanitation policies in chapter 4. The respondents, shared that the toilets lack lighting, there are no sanitary

disposal bins inside the toilets and there are no water facilities close to the toilets. Furthermore, the CoCT does not maintain the toilet facilities. According to the household respondents, given that the CoCT is DA-led the political party in the municipality acts as if it has done the community a favour by providing it with the taps and toilets, since the settlement falls under an ANC-led ward. The respondents feel that this is the reason why the facilities provided do not meet the minimum standard of basic access to water and sanitation.

The current QQ Section community committee leader and the household study respondents reported that upon his return, and having realised that QQ Section was assisted by the sub-council manager with the provision of toilets, Nick threatened the sub-council manager. Nick told the sub-council manger that if he ever assists QQ Section again Nick will use his ward councillor position to ensure that he loses his sub-council manager job. This information was given by the sub-council manager to the settlement after the settlement had made several attempts to meet up with him, for more assistance with water and sanitation services.

In 2018 SJC approached QQ Section, intending to work together with the settlement to assist the settlement with its sanitation challenges. However, the community was still traumatised by the abuse it endured under Mark and ABM. As a result, the community rejected working with SJC. The household respondents and respondents from the focus groups shared that after the marginalisation the community endured from Mark the community does not want to work with any organisation. The respondents further claimed that they only trust their current community committee, and no other organisation. Presented in Figure 4 is a summary of the role of institutional arrangements in shaping water and sanitation services in QQ Section.

Figure 4

Summary of the Role of Institutional Arrangements in Shaping Water and Sanitation Services in QQ Section



Marlboro South case

5.5 Characteristics of respondents: Marlboro South

Below is a simple table outlining the socio-economic background of study respondents in Marlboro South. Marlboro South has high levels of patriarchy, which further affects the

living dynamics in the settlement. As presented in Table 4, out of the 37 respondents in Marlboro South 87% reside in single-headed households. With 45% out of the 37 respondents residing in men single-headed households, women from these households refused to participate in this study without first getting permission from the men household heads. Some of the 41% of women respondents residing in women single-headed households had to get permission from the men in the relative community leadership structures before participating in this study. This further shows how patriarchy has shaped living conditions in the settlement.

Table 4

Summary of the Socio-economic Background of Respondents: Marlboro South

Gender of the head of Household	45% Men single-headed households 41% women single-headed households 14% Men & women-headed households
Employment status	54% someone formally employed in the household 41% no one employed in the household 5% self-employed
Household size	49% have 4-7 household members 41% have 1-3 household members 10% have 8-above household members

At the household level, 54% out of the 37 interviewed women claimed to reside in households where there is a household member formally employed and 5% claimed to be self-employed. Due to the patriarchal practices in the settlement, the respondents claimed that whoever is working in the household be it a man or a woman, the final decision on how the household income is spent is made by the man. 41% reported residing in dwellings without any household member who is employed.

Given that the size of dwellings in Marlboro South ranges from 8m2 to 25m2 the shacks are too small to house more than two people. The 49% of the 37 household respondents

who reported to reside in households of 4-7 members and the 11% that reside in households of eight and more members shared how difficult it was to share a dwelling with multiple households as there is no privacy in the dwellings.

5.6 Institutional dynamics in Marlboro South

Just as in the case of QQ Section, several formal and informal institutions have influenced everyday life and in turn the access to water and sanitation in Marlboro South. The institutional power structures that have affected water and sanitation conditions in Marlboro South include: SANCO, MWCC/area committee and the relevant sub/building committees, organisations under SDI such as FEDUP, CORC and ISN. Furthermore, other institutional power structures include the ward committees and ward councillors, and the CoJ Metropolitan Municipality.

The background information and the relations between these institutions and how they have affected water and sanitation in Marlboro South is outlined in the following sections of this chapter.

South African National Civic Organisation (SANCO)

The first institutional power structure which has had an impact on the status of water and sanitation services in Marlboro South is SANCO. As previously discussed in the QQ Section case that SANCO is a civil society organisation that was formed in 1992 and it represents +/-4000 local branches (Heller & Ntlokonkulu, 2001). As per its Constitution, the organisation pledges to ensure it commits to a unified, democratic, non-sexist, non-racist, non-exploitative South Africa based on the rights and values enshrined in the Bill of Rights of the Constitution of the RSA (SANCO, 2001).

The Constitution of SANCO clearly states that SANCO is a non-political organisation as such it is an independent organisation that is not politically affiliated (SANCO, 2001). However, reports show that SANCO is one of the main alliances of the ANC (Seekings, 1997; Zuern, 2004; Stadler, 1997). The organisation’s Constitution claims that SANCO was founded by South African residents and it is founded on the basic needs, desires and

expectations of the masses of the people. Its slogan is people-centred and people-driven (SANCO, 2001).

In Marlboro South, SANCO worked together with the CoJ as the municipality's revenue collector for the use of basic services. SANCO approached the CoJ and the owners of the warehouses and reached an agreement that the organisation will collect rent from the warehouses' occupants on the owner's behalf and pay the CoJ for basic services and the rest of the money will be paid back to the owners. Thus, the organisation was the liaison organisation between the CoJ, the rightful owners of the warehouses and the Marlboro South informal settlement.

Marlboro Warehouse Crisis Committee (MWCC)

The MWCC or what residents refer to as the area committee, was established in 2006 after the settlement experienced evictions in 2005. Members of the MWCC are elected in power by the whole community. The previous MWCC leadership had been in power since 2006, the community decided in 2017 that new leaders had to be elected to serve in the committee every two years. Thus, in 2017 the community elected new leaders to serve. After being elected the new MWCC leaders are expected to hold a meeting with the whole community where the new members are introduced and their portfolios communicated to the community and they present the issues they aim to push forward to relevant stakeholders.

This structure represents the larger community, it is meant to be the voice of the community when communicating with other CSOs, the Ward councillor, government and any other stakeholders to develop workable, sustainable and legal solutions for the problems facing the area (Böttger & Frits, 2010). Furthermore, the MWCC is responsible for ensuring that all the warehouses in Marlboro South have building committees. The MWCC works in close relations with the building committees when dealing with issues and challenges that need municipal and other stakeholder inputs in each of the warehouses. Among others, the challenges include issues of water and sanitation services which require the municipality's input.

Building committee or sub-committee

After the MWCC was formed in 2006, a decision was made to form building or sub-committees the same year. The MWCC oversees the selection process of the people who are chosen to form the building committee in each warehouse. For each warehouse, building committees are informally selected by the occupants of the warehouse. These structures were formed to assist MWCC with issues that building occupants in each warehouse wish to take forward to the municipality or any other respective organisations working in the area. Building committees work in close relations with MWCC.

Other duties of the building committees include assisting warehouse occupants regarding challenges related to conflict, hygiene and cleanliness of the buildings. In addition, building committees are responsible for the collection of monies from the warehouse occupants to fix broken water and sanitation infrastructures such as taps, blocked toilets and water and toilet pipes. The amount collected depends on what needs to be fixed and how much it will cost to fix the infrastructure. Building committees are only regarded as legitimate if all or a majority of building occupants elect them into power. These leaders serve for a term of twelve months.

Slum Dwellers International (SDI)

SDI is a global social movement that was established in 1996 when federations of the urban poor in India and South Africa decided that a global standpoint could be beneficial for their local programmes in finding alternate ways to deal with evictions while also influencing the global agenda for urban development (Arputham, 2014). The organisation deals with urban informal settlements in 33 countries across Africa, Asia, Latin America and the Caribbean (Das, 2010). Funding for SDI has mainly come from northern Non-Governmental Organisations (NGOs), development agencies and private foundations (Das, 2010). The core values and aims of SDI are to build a voice and collective capacity in urban poor communities. The organisation consists of structures that deal with different tasks and aspects of what the broader SDI aims to achieve. In Marlboro South, the

structures of SDI which have worked closely with the community include; FEDUP, CORC and ISN.

FEDUP is a saving scheme that assists communities in organising their finances. The scheme was officially launched in 2006. Selected women from the relevant communities run the scheme. FEDUP assists in screening the women who are selected by the community to run the scheme. Within the selected group of women, the community chooses three entrusted women signatories. The savings are used mainly for developing the communities as well as acquiring suitable land where the communities could be placed. The organisation meets quarterly to go over the books and finances of the relevant communities.

The second structure under SDI which worked with the community of Marlboro South is ISN, which is a project and advocacy-based sphere of SDI. ISN aims to bring informal settlement communities together and teach them how to sustain themselves and build towards improving their living conditions and not be solely dependent on the state.

Moreover, the third structure under SDI is CORC, which is a Non-Profit Organisation (NPO) that serves as a support structure for the social and technical processes of the other two structures of SDI namely; FEDUP and ISN. CORC assists the two structures in developing strategies for inclusive urban centres through communicating with the relevant stakeholders including governments and communities.

In Marlboro South, all the SDI structures worked closely with MWCC and assisted in ensuring that when MWCC does the building committee selection process, it does it fairly. Additionally, the SDI structures worked in close relations with the CoJ in developing ways to assist the community with access to service delivery.

Ward committees and ward councillors

As previously outlined in the QQ Section case, ward committees and ward councillors were originally formed in 1999 and they are voted into power in the local government

elections by the various communities, which fall under a specific ward (DPLG & GTZ, 2005). Members of the committee are elected to represent the interest of communities within a specific ward and report on matters affecting the ward to the municipality, through its ward councillors and in agreement with the processes determined by the relevant municipality (SALGA, 2016).

Marlboro South is led by two ward committees and has two ward councillors from two different political parties. This division happened during a demarcation process that took place in 2012, which led to the area being divided into Ward 108 which is ANC-led and Ward 109 which is DA-led. As a result, the ward committees from the two wards are meant to work in close relations with MWCC, ward councillors and the CoJ. The ward committees have the responsibility of listening to the grievances of the settlement through the MWCC and taking the grievances forward to the relevant ward councillor, the ward councillor reports the grievances to the CoJ.

Given that at the time this research was conducted the CoJ was under the DA administration while Ward 108 was ANC governed, the CoJ carried the responsibility of ensuring that it works together with its Ward 109 councillor and the Ward 108 councillor without any biases in providing the settlement with basic services. Thus, the ward councillors and the municipality should put the needs of the communities before those of the political parties to serve the community fairly.

City of Johannesburg Metropolitan Municipality (CoJ)

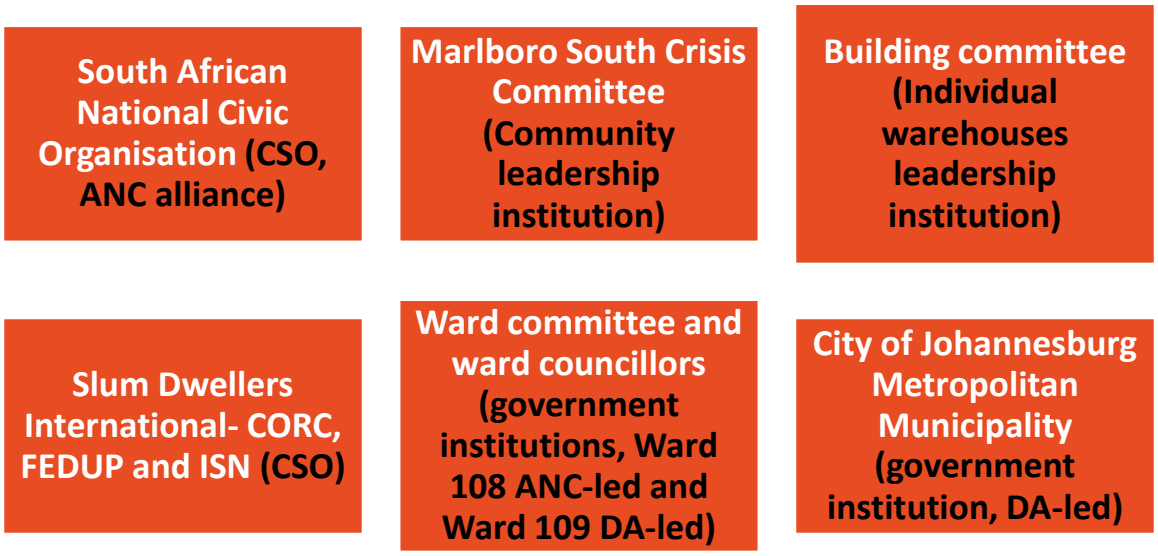
The City of Johannesburg municipality as per its Constitutional obligation and the Water Services Act 108, has the responsibility of ensuring that all the people under its area of jurisdiction have access to basic water and sanitation services. In 2008 the CoJ introduced the Expanded Social Package (ESP), which is meant to provide a basket of basic services for poor residents within the municipal grid (CoJ, 2008). However, the ESP is criticised for not working in favour of informal settlement dwellers. To benefit from the ESP people are required to provide their CoJ Rates & Taxes Account, City Power Account/prepaid Metre Card or Metre Number, Eskom account/prepaid electricity Card or

Metre Number and Johannesburg Water account (CoJ, n.d) when applying. Given that informal settlement dwellers reside on land unlawfully, they do not have the documents that are required for an ESP application, as such they are excluded from benefiting from the basic services delivered through the package.

As further, highlighted in this chapter in the section dealing with the ward Committee and the ward councillor the CoJ should work in close relations with the relevant ward councillors in ensuring that Marlboro South has access to basic services. Presented on Figure 5 is a summary of the institutional arrangements in Marlboro South.

Figure 5

Summary of Institutional Arrangements in Marlboro South



5.7 Role of the institutional arrangements in shaping water and sanitation services in Marlboro South

Reports on how the first residents of Marlboro South occupied the settlement has always painted them as having hijacked the warehouses (Cox, 2015). Yet, the study respondents clarified that they occupied the warehouses through rentals, which they were previously paying to slumlords. According to the household respondents, respondents from the focus

groups and the previous MWCC leader, the slumlords were previous employees of the warehouses. When apartheid ended in 1994 the majority of the owners of the warehouses closed the businesses and fled to other areas, the employees saw this as a business opportunity. The employees hijacked and advertised the warehouses for residential accommodation in local newspapers. As a result, the occupants in Marlboro South occupied the warehouses thinking they were legal living spaces that were advertised by the real owners of the warehouses. The household respondents and respondents from the focus groups argued that they are the victims in the situation, thus, it is unfair for the media and government to portray them as having hijacked the warehouses.

The household respondents, respondents from the focus groups and the previous MWCC leader further shared that the CoJ found out the warehouses were being rented out for residential purposes when it noticed they were incurring water and sanitation bills, which were not being settled. The CoJ took the matter to court, in court the residents argued that they were renting the warehouses, and were paying for services to their landlords. As shared by the household respondents and respondents from the focus groups that when the slumlords were approached by the community regarding the matter they fled. This is how the settlement discovered that the warehouses were rented out by slumlords, and not the owners of the buildings. According to the household respondents and the previous MWCC leader, after the slumlords fled from Marlboro South and left the occupants to fend for themselves, SANCO saw this as an opportunity to benefit financially out of the situation. As a result, in the late-1990s SANCO approached the CoJ with the proposal that it will assist the municipality in looking for the owners of the warehouses, to ensure that the municipality receives payment for the use of basic services in Marlboro South. The CoJ which was under the ANC administration during that period went into agreement with SANCO. SANCO became the revenue collector for CoJ in Marlboro South. As shown in the SANCO Constitution where the organisation's mandate is outlined that the collection of revenue is not part of SANCO's mandate (SANCO, 2001).

SANCO managed to track some of the building owners. They all reached an agreement that SANCO will collect rent on the owner's behalf and pay the CoJ for basic services.

The rest of the collected money will be paid back to the owners. According to the household respondents and respondents from the focus groups, when SANCO approached the building owners the organisation did not have any good intentions, it just saw an easy way of exploiting the whole situation the same way the slumlords exploited the building occupants. In the early 2000s conflict developed between SANCO and the building owners. There were reports of inaccuracies in service delivery payments to the CoJ, SANCO was failing to make the payments on behalf of the building owners, while it continued collecting revenue from the settlement.

According to the household respondents and the previous MWCC leader, instead of holding SANCO accountable the CoJ approached the high court to get eviction orders against the warehouse occupants in 2003. In 2005 the CoJ started evicting and demolishing some of the warehouses leaving residents homeless. There was a huge outcry from residents, who believed that the matter was not handled fairly, as they were paying rent and they were paying for services. The high court ruled that the residents should be allowed to stay in the warehouses until the CoJ finds at least a minimum alternative accommodation for them. Due to these conditions Marlboro South residents are no longer paying rent to slumlords, SANCO or the warehouse owners and they are not paying for services to the CoJ either.

In 2007 the community of Marlboro South approached FEDUP for assistance, after it had undergone the 2005 evictions. According to the CORC representative, FEDUP involved ISN and CORC in trying to assist the community with its living conditions. In 2007 CORC screened people from MWCC and the community. The CORC representative further shared that ISN trained the screened personnel and ensured that there was a fair representation of women in the screened group of people. From the screened group the following teams were established: negotiating, technical, communications and finance teams which made up a new MWCC structure. Furthermore, MWCC with the assistance of SDI established building committees with a fair representation of women in each of the warehouses.

The interviewed CORC representative shared that when the SDI structures started working with the settlement it was challenging. The challenges were caused by political divisions in the old community leadership structure and the use of protest demonstrations as a means of communicating with the government. With the relevant training offered by ISN the community had effective negotiating skills, which are now used when engaging with the government.

After the new MWCC structure was established, in 2007 FEDUP helped the finance team in establishing the community savings scheme. The savings scheme was operated by women only. Under the scheme each community member was required to contribute R7 per week. According to the household respondents and the FEDUP representative, the scheme aimed to have enough funds for the community to buy the warehouses they reside in from their rightful owners so that the occupants could have tenure. This would give the CoJ the ability to assist the community with rezoning and upgrading the settlement into a residential area.

CORC was given the task to determine the total number of residents residing in Marlboro South. According to the interviewed CORC representative, when the organisation first started to work with Marlboro South reports from the department of housing were that the area consists of 2000 migrants from outside of South Africa. The CORC representative shared that the government used this as an excuse not to assist the residents with basic services provision. The government claimed that it is obligated to provide South African residents with services and not none South African migrants who reside illegally on private property. CORC found that the area had a population of 6000 people, the majority of which were South African residents. The government therefore, was obligated to assist the community with services provision.

In 2007/2008 CORC helped the settlement in identifying its most important needs, which included water and sanitation services. Discussions were held with the CoJ to assist the community. These discussions resulted in the installation of standpipes and chemical toilets for the warehouses that had no water and sanitation infrastructure. The household

respondents and respondents from the focus groups claimed that the sanitation facilities provided by the municipality were located far from dwellings, not cleaned regularly, lack lighting and do not have sanitary disposal bins inside. Moreover, the communal standpipes were located far from dwellings and were not maintained when they are broken and there were no water facilities close to sanitation facilities to practice good sanitation hygiene. These conditions of the water and sanitation facilities verify the Ward 108 councillor's views who claimed that the provision of gender-sensitive services is the least of the CoJ's priorities in Marlboro South. As per the Ward 108 councillor the major concern for the CoJ under the ANC administration was that the settlement is located in an industrial area. The majority of the warehouses in Marlboro South continued using illegal connections that were connected to the existing warehouses water reticulation and sewer systems.

With the assistance of CORC, in 2012 the settlement approached the University of Johannesburg's (UJ) Faculty of Art, Design and Architecture to assist with developing sketches and plans. These were going to be used as a tool when the settlement engaged with the CoJ regarding rezoning and upgrading the settlement from an industrial to a residential area. UJ working together with the community managed to develop sketches, which showed that it is possible to rezone and upgrade the area into a more residential area without demolishing the warehouses.

According to the previous MWCC leader, in 2012 there was a demarcation that led to the division of the settlement into two wards. The wards are led by two ward councillors from two different political parties, Ward 108 is ANC-led and Ward 109 is DA-led. With these political complications that took place in 2012 in 2013 Marlboro South experienced more evictions. The CoJ evicted residents from their homes without any alternative shelter. In this instance the CORC representative claimed that CORC had to assist the residents by constructing tents for them to at least have a place to sleep, as they were left on the streets with nowhere else to go.

Furthermore, in 2014/2015 two owners of the warehouses in Marlboro South donated two buildings to the community. With the plan developed by UJ and Marlboro South in 2012 and with the evictions that took place in 2013, the CoJ while it was still under the ANC administration had an interest in assisting the community with the rezoning and upgrading of the area. In 2014/2015 the rezoning and upgrading negotiations between MWCC and CoJ started. According to the CORC representative, the first condition that the CoJ had before it could assist the settlement with the rezoning and upgrading was that the occupants needed to have tenure. This meant that the rightful owners should either donate the warehouses, agree for the occupants to reside in the warehouses or the occupants should find ways of working together and purchase the warehouses from the owners. The first phase of the upgrading was planned to start with the two donated buildings.

As further shared by the CORC representative that the second condition the CoJ had before it could assist the settlement with the upgrading and rezoning was that no extra people should occupy shacks in the warehouses. This was done to avoid the fluctuating number of occupants so that the number of occupants that appeared in the CoJ records remained constant. This was done to make the situation easier once the CoJ was ready to implement the rezoning and upgrading process. However, as shared by the household respondents that before the rezoning and upgrading plan could be formalised between the CoJ and the community of Marlboro South, in 2015 some of the MWCC leaders started building and renting out shacks in the warehouses. This resulted in the formation of a new group of slumlords within the community, who were MWCC leaders. This caused delays in the rezoning process, as the number of people increased to more than what the CoJ had initially recorded. This information was supported by the key-informant from CORC who argued that the leaders who were renting out the shacks began to block the rezoning and upgrading process because it was going to affect the income they were receiving from the rentals. The allegations were further verified by the Ward 108 councillor who claimed when the CoJ was ready to rezone and upgrade the area the unethical behaviour of certain individuals in the MWCC structure blocked the process. As per the Ward 108 councillor the individuals in the structure rented out shacks from the

warehouses and blocked the whole process. Hence, the CoJ could not go ahead with the rezoning and upgrading plans. As a result, without the area being rezoned and upgraded Marlboro South residents would have to continue residing in a settlement with insufficient access to formal water and sanitation facilities. The majority of the settlement would have to continue using informal water and sanitation arrangements.

Additionally, issues related to the lack of financial accountability emerged in the communal savings scheme with FEDUP in 2015. The household respondents and the previous MWCC leader reported how FEDUP changed the agreement it had with the community regarding the community savings. FEDUP changed the savings scheme into a loan scheme without consulting the community. The organisation allowed only members of the executive committee to borrow money from the scheme and return it with interest. When the community heard of the changes it was not pleased and rejected the changes. The community felt that the changes would benefit only a few people and divert the focus from the main goal of the scheme, which was to acquire the warehouses for rezoning and upgrading. The household respondents claimed that the situation was worsened when the community discovered that one woman who was part of the saving scheme borrowed R15000 without the knowledge of the community. The money was used to buy land in order for Utshani, which is one of the SDI structures, to assist her with building a house. This caused conflict between FEDUP and Marlboro South, which led to the scheme being dissolved. By dissolving the scheme the settlement lost its opportunity of acquiring the warehouses to have secure tenure, which would have assisted the rezoning and upgrading plans to be implemented.

According to the interviewed ISN key informant and some of the household respondents, other challenges between the community and SDI occurred when some of the Marlboro South residents who worked for ISN raised questions regarding accountability on the use of donor funds. The respondents claim that questions were raised on how the donor funds, which were meant for Marlboro South were spent. As per the ISN key informant and the household respondents, these questions were raised since there was no feedback and evidence from SDI to show the community how the funds were used for its

benefit. The household and ISN study respondents claimed that raising these questions caused conflict between the organisation and the representatives. The organisation felt that the representatives were behind the questions raised by the community, and in doing so they were causing conflict between the organisation and community. As a result, the organisation suspended the representatives in 2016. The names of the representatives were cleared in 2017, after they were found not guilty of any wrongdoing. However, the organisation never addressed the accountability concerns around the donor funds. Due to these conditions the ISN key informant felt that the matter was not handled fair.

All these events that took place between Marlboro South and the SDI structures created tensions in the relationship between these structures and the community. As a result, this led to SDI leaving the area in 2016 and no longer being as active as it was in the settlement. Additionally, after the negative implications on the rezoning and upgrading plans of the settlement, which were caused by the MWCC leaders, the community decided to create a new MWCC structure in 2016. However, the new MWCC is reported to be ineffective in pushing the community's service delivery needs forward. The household respondents and respondents from the focus groups further reported that the new MWCC leaders have been trying to turn the structure into an NPO in which people will be expected to pay membership fees for them to form part of the structure.

Yet, at the warehouse level the household respondents and respondents from the focus groups claimed that the new MWCC has failed to assist with the creation of building committees. As reported by the respondents that without proper building committees men in many of the buildings use patriarch and tribalism to create building committees and enforce themselves into power positions. The household respondents argued that in these warehouses women are excluded in the created building committees and their specific water and sanitation needs are not considered. Furthermore, the household respondents claim that in these warehouses the building committees are created according to South African ethnic groups such as the Zulu, Pedi, Tswana, Tsonga, Venda and Sotho, which are the main ethnic groups found in Marlboro South. As a result, each group looks after the needs of occupants who belong to their specific ethnic group, and

the needs of other warehouse occupants are disregarded. These divisions are reported as one of the key causes of conflict in the warehouses.

Due to the delays and blockage caused by MWCC in the upgrading and rezoning plans, in the 2016 local government elections the ANC lost votes to the DA before the plans were formalised. The DA held power in the CoJ from 2016 until 2019, which is the period in which the data collection of this study falls under. As per the household respondents, when the DA ward councillor was canvasing for votes for the local government elections in 2016 she promised to assist the settlement with water and sanitation supply when the DA wins in the CoJ. However, once the DA was elected into power the changes in the governance of the municipality, from the ANC administration to the DA administration, created further complications for the rezoning and upgrading process and water and sanitation provision. The DA had different policies and ideas from the ANC. Once it was elected into power the DA did not fulfil the water and sanitation provision promise it made to the settlement, instead the political party wanted to evict the residents and make the area strictly industrial as it was originally. According to the household respondents, the community of Marlboro South had to start the upgrade and rezoning negotiating process from the beginning because the DA claimed that it did not agree with the ANC plans and policies. The household respondents acknowledged that without the support of SDI the re-negotiation has been a challenge.

These political changes further created complications related to service delivery provision at the ward level. The ANC ward councillor shared the difficulties she has been facing, being an ANC ward councillor working in a DA-led municipality. According to the ward councillor, whatever projects she plans to implement in areas under her ward including Marlboro South, the projects are placed aside at the municipal level and DA ward projects are given priority. As a result, she felt that she was being sabotaged since she was an ANC ward councillor working in a DA administered municipality. Presented in Figure 6 is a summary of the role of institutional arrangements in shaping water and sanitation services in Marlboro South.

Figure 6

Summary of the Role of Institutional Arrangements in Shaping Water and Sanitation Services in Marlboro South



5.8 Institutional analysis of water and sanitation in QQ Section and Marlboro South

This study reveals different factors associated with different institutions, and how they have affected water and sanitation access in both settlements. At the government

institutional level, the study results indicate that the emerging theme in both settlements is the issue of politics at local government, which has affected water and sanitation services. Within this broader theme, there are sub-themes such as challenges related to the alliance government political system and the political contestations to accumulate political power at local government. Other sub-themes include clientelism, which involves making empty water and sanitation promises to gain votes, with the aim of pushing the interests of the political party and issues of lack of prioritisation of gender in water and sanitation at the municipal level.

This study shows that the water and sanitation challenges that are associated with government institutions are first linked to the alliance political government system, between the ANC and SANCO, in both informal settlements. However, the conditions of how water and sanitation have been affected by the system differs between the two settlements. As presented in the QQ Section case that the settlement has been facing marginalisation, political exclusion and lack of water and sanitation services provision as a form of punishment from ANC ward councillors for leaving SANCO in the late 1990s. As a result, instead of serving the community the current ward councillor was fighting SANCO battles in the settlement. The aim of the ward councillor was to make the settlement suffer until the community realises it needs to go back to being a member of SANCO for it to get assistance from the ward councillor. However, the marginalisation pushed the settlement further away from the ANC, hence the settlement decided to change its vote to DA in 2016.

Further marginalisation in terms of lack of water and sanitation faced by the settlement at the hands of the ward councillor was shown by the ultimatum given by the ward councillor in 2016. After the settlement tried voting the ward councillor out he told the community to re-join SANCO if the community wanted him as an ANC ward councillor to assist the settlement with water and sanitation services provision. This highlights the argument made by Jolobe (2014) that regardless of the transformation of the local government sphere, which included the introduction of ward councillors and ward committees, the system has failed to live up to its expectations. The way that the ward councillor

marginalised QQ Section validate the reasoning behind the rational of ward councillors having been placed as targets of services delivery protests in informal settlements (Bénit-Gbaffou, 2008). Moreover, the failure to hold the ward councillor accountable for its misconduct and lack of response by the ANC, as the political party which both SANCO and the ward councillor fall under, clearly shows how in an alliance government political system loyalty is given to organisations in the alliance at the expense of the poor. This further highlights the flaws in the alliance government political system and the South African democratic system as a whole.

In the Marlboro South case the conditions transpired differently from the QQ Section case. When the CoJ, under the ANC administration, gave SANCO the mandate to collect revenue on the municipality's behalf, the municipality acted unethically. The duties that were offered to the organisation are not part of SANCO's mandate, the organisation was offered the duties based on its affiliation with the ANC as one of the ANC alliances. Yet, when SANCO failed to deliver and discrepancies developed in the payments meant for CoJ, the ANC did not take any steps to hold the organisation accountable. Instead of holding SANCO accountable, the CoJ under the ANC administration, infringed Marlboro South of its right to water and sanitation access, while the settlement was paying for services to SANCO. Hence, the community fails to understand the reasoning behind the CoJ's decision of not reconnecting the water and sanitation in all the warehouses. Thus, Marlboro South still feels punished for the failures of SANCO.

According to one of the study respondents in the settlement:

> The CoJ's approach towards our water and sanitation is the same as the slumlords and SANCO who exploited us and left us without any water and sanitation. This is why we will continue using illegal connections until the CoJ decide to treat us fairly and formally reconnect our water and sanitation services (Marlboro South Respondent 3, personal communication, 17/04/2018).

While there are differences in the two case studies in terms of how the events transpired, yet both settlements highlight how the alliance government political system has limitations

of political representatives serving the alliance at the expense of citizens. The need to protect the desires of the alliances and to show unity internally, between the political party and its alliances in such a system, leads to the political party protecting and shielding the unethical behaviour and misconduct of the alliances at the expense of the poor, as shown in both cases.

The second sub-them under the politics main theme that emerges on how the government institutions have affected water and sanitation in the two settlements is the challenge of political contestations at the municipal level. As shown in the QQ Section case, access to water and sanitation at the ward and the municipality levels was based upon sabotage between the DA and ANC political parties. The implications of having the DA governing the CoCT municipality while Ward 89, which QQ Section falls under, is governed by the ANC has resulted in the settlement being used as a weapon by the political parties to accumulate more political power. QQ Section finds itself being marginalised by its ward councillor, and the DA as the political party holding power in the CoCT failed to hold the ward councillor accountable for the misconduct. The DA in the CoCT continued watching QQ Section being marginalised by the ward councillor. This was a strategy used by the DA to highlight the poor performance of the ANC within Ward 89, to accumulate more political advantage and power over the ANC in the ward by acquiring the votes from QQ Section.

While the CoCT eventually supplied some water facilities and communal shared flush toilets in the settlement the quality of the facilities is very poor. In this regard, the DA sabotages the ANC by supplying an informal settlement which falls under an ANC ward with sanitation facilities that do not have lighting inside, facilities that do not have sanitary disposal bins and water facilities close to them and not maintaining the provided water and sanitation facilities. All these water and sanitation failures from the DA are its way of making the settlement struggle under the ANC administration at the ward level with the aim of swaying the residents' votes from the ANC to the DA. As a result, service delivery in QQ Section is not about prioritising the water and sanitation needs of the settlement, it is more about both the political parties using the dire water and sanitation conditions in

the settlement for political power accumulation and pushing their political interests. Under such circumstances, it is mainly the poor communities that struggle the most with poor access to services. These conditions leave poor communities in a state of uncertainty with nowhere to seek help, as the same leaders who are meant to assist the settlements are the ones using them to push their political interests.

This is further evidence of the responses from the respondents in the QQ Section. Respondent 13 claimed:

> We have nowhere to report the unfair treatment of the Ward Councillor. The CoCT makes it clear to us that it cannot do anything to assist us every time we go to the offices to report the unfair treatment of the Ward Councillor. The municipality constantly tells us that the CoCT is DA-led and our Ward councillor is an ANC councillor so we must report him to the ANC and not to the CoCT (QQ Section Respondent 13, personal communication, 12/02/2018).

In QQ Section the household respondents and respondents from the focus groups view the South African political leaders as useless leaders who pretend to care about their needs during election season. The majority of the household respondents perceive voting as a waste of time that has not bought any positive changes to their services delivery and living conditions.

Similar conditions of political contestations persist in Marlboro South, where the CoJ just like the CoCT was administered in terms of political affiliation when the DA held power from 2016-2019 in the CoJ. The challenge of having two political parties in power at the local government level affected how budgeting was distributed in the CoJ. Just like in the QQ Section case the political contestations and sabotage, which took place between the DA and ANC in the CoJ affected water and sanitation services delivery in Marlboro South. By sabotaging the ANC ward councillor in terms of budget distribution the DA in the CoJ was sabotaging the ANC wards, in order for the ANC to lose votes and the DA can gain political advantage to accumulate more political power.

These views were highlighted by the Ward 108 ANC councillor in Marlboro South who argued:

> It is difficult being an ANC ward councillor in a DA administered municipality. I try my best to deliver services but water and sanitation projects that are meant to be implemented in my ward are continuously blocked at municipal level and only DA ward projects receive budgets for implementation (Marlboro South Ward 108 councillor, personal communication, 22/10/2018).

Conditions of political contestations and sabotage at municipal level in the two settlements support the views of (Nyamukachi, 2005; Masuku and Jili, 2019) that local party politics directly affects the functioning of the municipality, especially when more than one political party holds power in a municipality. The different political parties are constantly competing for power within the municipality, and the competition affects how policies are implemented and how water and sanitation services are delivered.

Furthermore, while both case studies reveal the political alliance system and political contestation at the municipality level as emerging sub-themes under the politics main theme, the Marlboro South case further reveals the challenge of clientelism. In Marlboro South clientelism is highlighted by the false promise of water and sanitation provision made by the DA Ward 109 councillor to the settlement in exchange for votes. After being voted into power, the DA ward councillor disregarded the rezoning and upgrading negotiations that were in progress between Marlboro South and the CoJ, under the ANC administration. These negotiations would have resulted in improved water and sanitation services for the settlement. As a result, this shows how the informal settlement's water and sanitation needs are used to drive political interests by political representatives. In this instance the Marlboro South case support the views of (Bénit-Gbaffou, 2006; Jones et al. 2014; Mananga, 2012) that clientelism in South Africa is shown by the way political representatives visit informal settlements, and make promises of improved access to

basic services during their political manifestos. The representatives make the promises to gain more votes, and they fail to deliver after they have been voted into power.

This case further reveals that at the local government level political parties and representatives are more loyal to the party than citizens. As a result, when the DA held power in the CoJ it was clear that the representatives were there to serve the needs of the party and push the interests of the party, by making the area industrial. In trying to fulfil the interests of the political party, political representatives tend to ignore the fact that they are put in power positions by citizens to serve the needs of citizens first, before those of the party. Hence, it was easy for the ward councillor to turn against her promises of water and sanitation provision she made to the settlement, after she was voted into power. Fulfilling this promise was going to derail the party's plan and agenda of turning the area into an industrial area.

Thus, the settlement was given false hope to vote for a party that would not only infringe it from its water and sanitation human rights, but it further planned to evict the settlement occupants from a place they have called home for years. This case highlights how political representatives push to fulfil the political interests of the political party at any cost, even if it means further marginalising the poor, as the DA was doing in this regard. Similar to the QQ Section case, the household respondents in Marlboro South voiced out how political parties and their representatives acknowledge their existence and importance when they need the residents' votes.

The case of Marlboro South further shows how government institutions fail to prioritise gender in water and sanitation. To have a political figure such as the Ward 108 councillor stating that gender is the least priority of the CoJ when it comes to water and sanitation provision, shows the ignorance of government representatives towards the water and sanitation struggles of women in informal settlements. Hence, the municipality provided the settlement with sanitation facilities that are located far from dwellings, not cleaned regularly, lack lighting, do not have sanitary disposal bins inside and there are no water facilities close to sanitation facilities to practice good sanitation hygiene. The communal

standpipes are also located far from dwellings and are not maintained when they are broken. In this regard, the case of Marlboro South agrees with the argument of the UN (2017) that men and women in power-related positions such as decision making, policy-making and implementation, still question the relevance of gender in water and sanitation. They choose not to recognise the differences between men and women concerning demands, access and control over water and sanitation resources and capacities (UN, 2017).

The literature debates in chapter 2 that focus on the role of governments in dealing with water and sanitation in the informal city mainly highlight poor water and sanitation access in informal settlements as a weapon used by governments to combat the settlements' growth (Dagdeviren & Robertson, 2011; Mahabir et al., 2016; Mutisya & Yarime, 2011; Sana & Okombo, 2012; Turok, 2014). Furthermore, other scholars place their arguments on cost recovery, their arguments mainly reveal how governments and other suppliers only provide affluent areas with water and sanitation where they will recover costs, and neglect informal settlements (Awumbila, 2017; Bond, 2006; Dagdeviren & Robertson, 2009; Hall & Lobina, 2008; Jones et al., 2014; McGranahan, 2015; Mitlin & Walnycki, 2019; Nunan & Satterthwaite, 2010; Tacoli et al., 2015).

Additionally, some of the debates highlight how there is a lack of prioritisation of sanitation provision over water, due to the high costs associated with building sanitation infrastructure and the numerous technical, bureaucratic, and legal constraints that are connected to sanitation development, as compared to water (Corburn & Hildebrand, 2015; Hawkins, et al, 2013; Isunju, 2011; Nuhu & Mpambije, 2016; Toubkiss, 2008).

While all these arguments are important, the findings from this study however mainly support the arguments made by (Bénit-Gbaffou 2006; Masuku and Jili 2019; Mananga 2012; Okecha 2010; Reddy, 2016; Thornhill, 2012) in the literature debates in chapter 2 and the debates in chapter 4. The scholars argue that the delivery of basic services is extremely affected by clientelism and politics, they emphasise that 'politics' does not only refer to party politics but it includes the whole decision making process in the public

sector. This mainly includes important questions such as who receives what, when, where and how in a service delivery context at local government (Thornhill, 2012). This argument demonstrates that the issue of politics is broad. This study highlights the broadness, by showing three ways (political alliance system, political contestations and issues of clientelism associated with unfulfilled promises for political interests and political power accumulation) in which politics manifested in the CoCT and CoJ and affected water and sanitation services delivery in the two case study settlements.

As much as the debates unpack important factors associated with politics and how these affect water and sanitation in informal settlements, however the debates do not unpack the political party alliance system and its negative impact on water and sanitation service delivery. Thus, this study managed to show the water and sanitation challenges resulting particularly from the political alliance system between the ANC and SANCO. As shown in this research this is one of the key causes of the poor water and sanitation access in informal settlements which needs to be given attention in literature debates.

Therefore, political representatives and political parties at local government should strive to serve the needs of citizens, and not put their political interests and those of the political party before citizens. This will assist in ensuring that municipalities implement water and sanitation policies that take into account the various needs of marginalised groups, thus, improve water and sanitation service delivery in informal settlements. There should be severe consequences for civil servants and political parties that fail to live up to the oath they take when they undertake duties in government institutions. These case studies show that it is not enough to have laws and regulations on paper without them being enforced and without any consequences for failing to follow the laws and regulations. Hence, it has become easy for civil servants to use poor water and sanitation provision in informal settlements to push political party interests and for political power accumulation.

While these challenges persist at the government institutional level, at the CSO level the emerging key themes are associated with governance practices such as accountability and transparency that are lacking in the CSOs in both case studies. Accountability and

transparency, as key governance factors, play a vital role in how organisations operate to achieve their aims and objectives. The findings in QQ Section reveal that ABM rushed into expanding to other provinces without ensuring that it has sufficient capacity and accountability mechanisms, to manage branches that are situated outside of Durban. In addition, the organisation failed to ensure that there were mechanisms in place to ensure that its representatives were transparent to the community concerning the use of donor funds, and how the organisation plans to fulfil the aims and promises it made to the QQ Section community. This highlights deep-rooted challenges of poor and lack of accountability mechanisms and poor transparency practices in ABM as an organisation. Hence, it was easy for the ABM representative in the settlement to abuse his powers to benefit financially from the donor funds that are meant for the community.

If the organisation would have had strong accountability mechanisms in place, it would have been easy to track the behaviour and measure the performance of the organisation's representatives, in the QQ Section and Western Cape Provincial branches. Failing to take accountability as an organisation, for the misconduct of its representative in the QQ Section settlement, further reveals poor treatment and negligence by ABM as an institution. ABM is meant to assist the marginalised in holding the government accountable for the poor supply of services. As a result, the household respondents and respondents from the focus groups voiced out that they would rather struggle as a community than allow organisations from outside to use and marginalise them. As previously argued that owing to the marginalisation of the settlement under ABM the QQ Section residents have rejected SJC's offer to work with the settlement.

The Marlboro South case also reveals similar issues of lack of accountability and transparency within the SDI structures. The way that FEDUP handled the community savings scheme demonstrated how poor transparency practices in CSOs can result in maladministration by such organisations, with the outcomes affecting poor beneficiaries. Marlboro South's upgrading and rezoning plans which would have seen the settlement with improved water and sanitation services were completely affected by the decision made by FEDUP, which resulted in the savings scheme being dissolved. Dissolving the

savings scheme meant that the settlement will not have the funds to buy the warehouses, for the upgrading and rezoning plans to take effect. As a result, the case of Marlboro South mainly highlights the views of Fox (2000) that CSOs need to be transparent to all stakeholders including beneficiaries, with the plans and steps that the organisation aims to make to achieve the required outcomes. Being transparent with beneficiaries entails the organisation sharing information with them and allowing the beneficiaries to give their input, as the outcomes of the decisions taken will mainly affect their lives.

Furthermore, accountability failures in Marlboro South were revealed by how community members who formed part of ISN were punished for raising financial accountability concerns, regarding donor funds. Given that CSOs use the names of the communities when they source out donor funding the communities have the right to be told how the funds will be used for their benefit. In the Marlboro South case, by failing to account to the settlement on how the donor funds that were meant to assist the settlement in acquiring warehouses, for the upgrade and rezoning process to have improved water and sanitation access, shows that ISN used the funds for other purposes.

As shown by the findings that the lack of accountability and transparency from the CSOs, that worked in the two case study settlements, had daunting implications on water and sanitation services. As a result, this shows that indeed more focus should be placed on how CSOs implement and practice accountability and transparency. As argued by the Commonwealth (2013) that the failures of CSOs in implementing effective accountability and more transparent approaches when handling donor resources are a result of such organisations implementing accountability relative to their capacities and budgets. Hence, scholars such as (Kaldor, 2003; Trivunovic et al., 2011) argue that this has been one of the key causes of unethical behaviour in some CSOs which this study has also highlighted.

Therefore, to ensure effective accountability and transparency this study shows that CSOs should further invest in an outside expert who will implement and oversee the accountability and transparency practices of the organisation. This will ensure that these

governance practices are implemented to the best of their ability, and that there are no biases towards the organisation or any other stakeholders on how the practices are implemented. Since CSOs are highly dependent on donor resources in carrying out their duties, this study further proposes that the donors should develop other innovative and effective ways of ensuring that the donor resources are effectively used. This includes surprise visits by the donors to the settlements, without the CSO's representatives present. This will enable the donors to make their observations and inspections on how their resources were used, and not only rely on what the CSO submitted to them when adhering to upward accountability.

While water and sanitation access in the two settlements have been negatively affected by formal institutional arrangements at the government and CSO levels, this study further reveals that the informal institutional arrangements, such as community leadership institutions, further affected water and sanitation in both settlements. Concerning the community leadership institutions, this study reveals that problems mainly arise when there are no enforced written guiding principles of the duties of the institutions and ways to hold the institution accountable. Problems further emerge when the communities lack willpower and are not actively involved in the operations of the institution, instead the communities are solely dependent on these institutions to fight for their needs.

As presented in the QQ Section case study that challenges between the settlement and its previous community committee and leader began when the leader held three power positions, being the community committee leader, ABM QQ Section branch leader and the ABM Western Cape branch leader. While all three positions were held by one person, the settlement failed to be actively involved in the decisions the leader and the community committee made, regarding the needs of the community and the community committee was not governed by any written guiding principles. Hence, it became easy for the leader to play a gatekeeping role, abuse his position and was able to go against the community's decision of wanting to relocate to an area where it would be possible for it to have improved water and sanitation access.

The changes made by QQ Section improved the how its community committee conducted itself. As previously discussed in this chapter that QQ Section currently ensures that all the community committee representatives get their mandate from the community. The settlement further ensures that it is actively involved in decisions made by the community committee and the community is determined and driven in fighting for better water and sanitation services in the settlement. Moreover, the community has strict written guiding principles, regarding the duties of the committee and accountability mechanisms in place. These changes have made it possible for QQ Section to have a community committee that assisted the settlement with sourcing water and sanitation from the CoCT. This further illustrates that the settlement learnt from its past mistakes of giving its leaders freedom, power and independence to make decisions without the concern of the settlement. The new community committee is made up of men and women that are driven and determined to improve conditions in the settlement.

As shared by one of the respondents:

> Unlike the old leaders, we had who abused us, our current community committee does its duties very well. QQ Section has water and sanitation supply because of the hard work of our community committee (QQ Section Respondent 13, personal communication, 12/02/2018).

As previously highlighted in this chapter that the household respondents and the new QQ Section community committee leader refer to the old community committee leader as a person who led by force and used the settlements' pain for his interests. According to the household respondents, the settlement has learnt from its mistake and will not allow its community committee to abuse its powers and make decisions on behalf of the community again.

Similar conditions as those that took place with the old community committee in QQ Section are also found in Marlboro South. Just like in the previous QQ Section community committee, the MWCC in Marlboro South is given power by the community to work independently, there are no enforced guiding principles to govern the institution. These

are the underlying causes that led to the MWCC leaders making decisions that only benefited them financially, yet, they were aware that the consequences of their decisions were going to affect the rezoning and upgrading process, which further negatively affected water and sanitation services. However, unlike the QQ Section community which learnt from its mistakes and changed how the structure operates, Marlboro South still allows the new MWCC structure to operate independently from the settlement. Hence, the new MWCC has been trying to change the whole structure to become an NPO without the settlement's concern. The changes will require all settlement dwellers to pay membership fees, this may further result in financial misconduct. This shows that just like the previous MWCC the new MWCC representatives aim to financially benefit from the water and sanitation struggles of Marlboro South. Making such changes without the concern of the community shows how the settlement has not been actively involved in the operations of the structure.

These changes seemed to be a concern for some of the residents. According to one of the respondents:

> If MWCC would be turned into an NPO, that would mean that only a few people who can afford to pay the required fees would benefit. This further has the ability to create more divisions in our community as we have previously seen with our previous leaders that where there is money involved there will be corruption and misconduct, and in this case the MWCC leaders will financially benefit from the community's pain (Marlboro South Respondent 12, personal communication, 20/04/2018).

Moreover, unlike the QQ Section settlement which is driven and determined, the community of Marlboro South does not have the same determined spirit. The household respondents and respondents from the focus groups in Marlboro South claimed that they do not see the use in choosing community leaders if the community still has to oversee if the leaders are performing their duties. This mind-set from the community is one of the underlying challenges as to why the whole settlement has not seen any progress in their

living conditions and access to water and sanitation services. This was also highlighted by the CORC representative, who argued:

> The residents of Marlboro South are lazy, they do not want to take initiative and fight for their well-being and access to services. They are used to having other people work for them. This has been difficult for us as an organisation, since we use a more community driven approach, we do not want to only work with community leaders we want the whole community to be involved in our projects (CORC Representative, personal communication, 12/07/2018).

Thus, this study coincides with the views of (Banks, 2006; Srivastava, 2013) who acknowledge the importance of having community leadership structures in informal settlements, while further stressing that some of the institutions have been the cause of challenges faced in informal settlements. As highlighted by the literature, some of the misconduct of such institutions include using a dictatorship leadership style to lead, this particularly was the case in QQ Section. Other misconduct includes leaders that use the community hardships, and make decisions that only benefit them instead of the whole settlement (Banks, 2006; Srivastava, 2013), these conditions were demonstrated in both settlements. Furthermore, Koster and de Vries (2012) seem to link the misconduct mainly to the lack of mechanisms to hold such structures accountable. This research study has demonstrated that the accountability mechanisms should further be accompanied by enforced written guiding principles of the duties of the institutions. Additionally, informal settlement communities should be actively involved in the operations of the institutions and most importantly the whole settlement should be driven and determined in ensuring that its living conditions and water and sanitation services are improved, and not only rely on the institution for all its needs.

5.9 Conclusion

In terms of the overall outlook of the institutional arrangements for water and sanitation access, this chapter indicates that it does not matter where power resides in these three hierarchies of power, informal settlements still face marginalisation in terms of their water

and sanitation services. Government institutional powers hold the overall responsibility of ensuring that poor communities are supplied with water and sanitation access. However, the politics that play out at local government result in political parties and representatives using water and sanitation access in informal settlements as a mechanism to push their interests and for political accumulation. This further negatively affects water and sanitation provision.

CSOs on the other hand are mainly perceived as organisations that should assist poor communities by holding the government accountable for not supplying services in such areas and assisting the poor in services access. Yet, the poor practice of transparency and accountability have further resulted in misconduct by some of these organisations, where their focus and the focus of some of their representatives has shifted from their main aim, of assisting the poor with services delivery access, to focus on personal gain and financial benefits.

Community leadership power institutions are formed by informal settlement dwellers to be the voice of the communities and assist the settlements with acquiring services in the absence of the formal institutions. However, the failure of not having written enforced guiding principles and accountability mechanisms, allowing the structures to work independently from the community without the community being more determined and actively involved in the structure has led to representatives making decisions that will only benefit them financially instead of decisions that benefit the whole community.

CHAPTER 6

INFRASTRUCTURAL ARRANGEMENTS WITHIN WHICH WATER AND SANITATION ARE ACCESSED IN QQ SECTION AND MARLBORO SOUTH

6.1 Introduction

This chapter presents an outline of the infrastructural arrangements within which water and sanitation services are accessed in both the QQ Section and Marlboro South. This chapter aims to show the water and sanitation infrastructural conditions in both settlements. The chapter is divided into three broad sections. The first section deals with the QQ Section case study, the second section deals with the Marlboro South case study.

The first and second sections begin with the infrastructural water and sanitation dynamics in the two individual cases. The types of water and sanitation practices used in the two settlements are described and the nature of access such practices offer is further discussed.

The third section gives a comparative analysis of the infrastructural conditions of both settlements. The section gives a comparative analysis of how the unsuitable nature of land in QQ Section and the unhealthy environment in Marlboro South affected water and sanitation infrastructural provision in the two settlements. Moreover, the section gives a comparative analysis of the nature of the settlements and the tenure dynamics on water and sanitation provision in the two settlements.

QQ Section case

6.2 Infrastructural dynamics in QQ

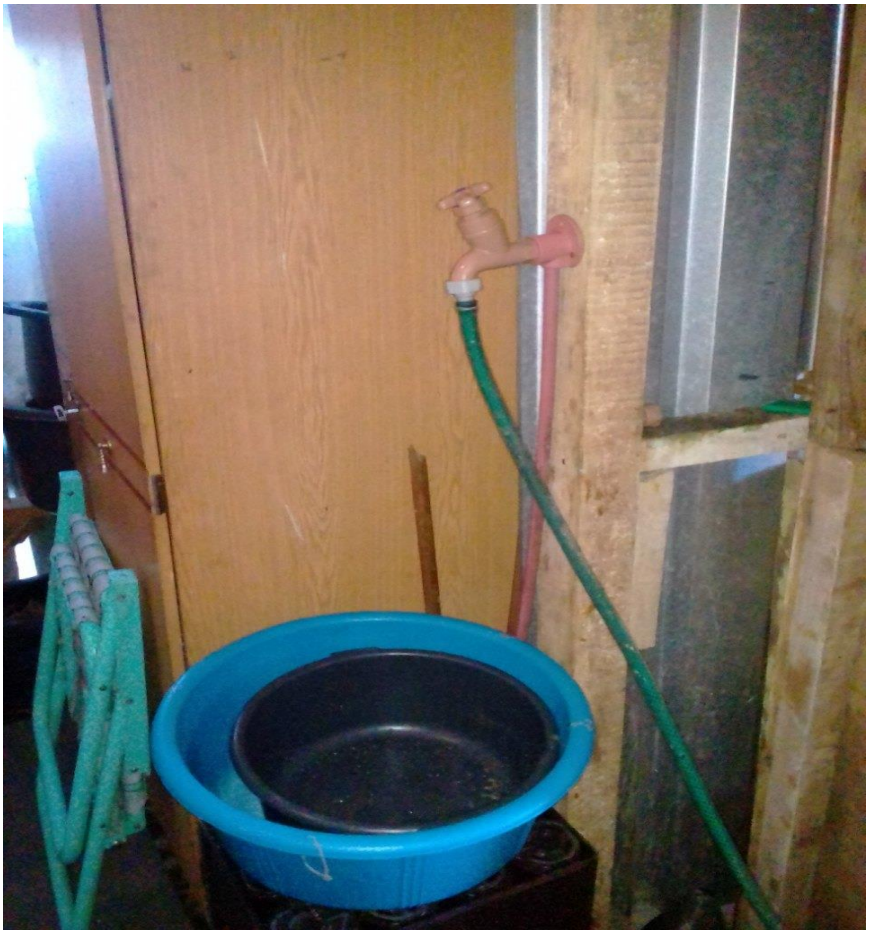
For over 20 years QQ Section residents lived without any water and sanitation services. For water access, they had to buy a 5-litre bucket of water from Q Section for R20 per bucket, for sanitation they used a bush that was situated across the road from the settlement, which is currently occupied by BM Section informal settlement.

Negotiations between QQ Section and the CoCT regarding the installation of water and sanitation services started in 2006, the first four taps were then installed in 2008 by the CoCT but the municipality failed to provide sanitation facilities during that period (DAG & DoHS, 2014). In 2016 the CoCT further installed fifteen communal shared standpipes in QQ Section and four more taps were attached to the communal toilets provided in 2017. As a result, QQ Section is made up of a mixture of formal and informal water practices. The majority of the household respondents in QQ Section reported that they use the nineteen communal standpipes that were installed in the years 2008 and 2016 and the four taps which are connected to some of the communal toilets that were installed in 2017, these serve as the formal water practices used in the area.

Some of the respondents reported that the challenges presented by the formal water practices forced them to use informal practices such as illegal water connections. These illegal connections are connected from the formally provided standpipes to the yards and inside dwellings. Figure 7 shows how households illegally connect their water inside their dwellings in QQ Section.

Figure 7

Illegal Water Connection inside the Dwelling



Other respondents argued that they are forced to either beg for a bucket of water from Q Section and some respondents claim that they rent water monthly or buy one or two 5 litre buckets of water when needed as other forms of informal water practices. The prices for a bucket range from R40-R80 each depending on what the owner of the tap charges in Q Section. The buckets are shared among all the household members.

Just like in the case of water, residents of QQ Section use a mixture of formal and informal sanitation practices. For formal sanitation practices, QQ Section uses the 27 communal flush toilets which were installed in 2017 by the CoCT at the edge of the settlement. In addition to these formal practices, a majority of the household respondents reported that they still use informal practices such as the buckets inside their dwellings and dispose of

the waste on the side of the road in the storm water drainage system and others claimed to relieve themselves in close bushes or the wetlands.

Additionally, just like in the case of water, other forms of informal sanitation practices used in QQ Section are rented facilities from Q Section. The toilets in Q Section are situated outside within an enclosed yard. To use the toilets in Q Section the residents of QQ Section are charged on a monthly or daily basis depending on the preference of the owner of the sanitation facilities. They are further told which detergents to buy for cleaning the toilets.

Insufficient and unreliable water and sanitation access

According to the household respondents and respondents from the focus groups, the formally provided taps and toilets by the CoCT are not enough. In 2014 the DAG & DoHS study findings estimated that to meet the minimum water and sanitation requirements QQ Section needed to have a total of 27 standpipes and 137 toilets which were to be shared by the settlement (DAG & DoHS, 2014). The 23 communal taps and 27 communal flush toilets provided by the CoCT in QQ Section would have not been enough in 2014 and given the constant growth of the settlement with the current estimate of +/-3000 people the water and sanitation services are completely insufficient.

However, regarding the issue of insufficient sanitation, the interviewed CoCT DoHS official voiced that the municipality previously tried communicating with the community to accept the installation of communal shared chemical toilets and Portable Flush Toilets (PFT) for each household. As further stated by the official, given the unsuitable nature of the land the settlement is located on, communal waterborne flush toilets are not ideal to be installed in the area. Therefore, chemical toilets and PFTs would have been a better option. The CoCT was willing to install the facilities for the community at no cost expected from the community. However, the community refused and told the municipality they want communal waterborne toilets.

Additionally, the official added that the PFTs would have assisted with sanitation access during the evening, the community refused these facilities too. As per the household and focus group study respondents, the refusal of the chemical toilets and the PFTs was based on experiences from other informal settlements, where the municipality would install such sanitation facilities and not collect the waste risking the health of people. Moreover, respondents further felt that the PFTs are very similar to the bucket system, which is demeaning to their human dignity.

The household respondents and the respondents in the focus groups reported that the use of illegal water connections provides unreliable access. Even though the respondents acknowledged that the use of illegal connections is better than using the communal water shared facilities and the rented facilities, it is a struggle during the weekends when the system is overloaded and the taps are normally dry. During these peak periods, the respondents claim that they are forced to ensure that they fill enough buckets on Thursday or Friday so they have sufficient water for the weekend.

Inconvenient and unsafe water and sanitation access

According to the household respondents and respondents from focus groups, the formally provided taps are located in inconvenient sections of the settlement. The water access points are placed far from residents that reside at the back of the settlement and those residing in the centre mainly close to the danger zones like the wetlands, where it is challenging to install infrastructure. It takes approximately 30min to walk to the nearest standpipe and approximately 40min or more minutes back, due to the heavy water containers one will be carrying on the way back. The distance is longer when it comes to accessing communal toilets and the rented water and sanitation facilities. It takes approximately 45min to walk to and another 45min walk from these facilities.

Furthermore, the household respondents, respondents from the focus groups and the current community committee leader highlighted that the settlement has high crime rates due to gang activities. Walking around the settlement even during the day is a constant risk. These respondents further shared that thugs are not afraid to attack people inside

their homes even during the day, so it is even worse when one is walking outside of their dwellings to water and sanitation access points. The household respondents and respondents in the focus groups that reside close to the wetlands claim that these are high criminal zones making it difficult to access water and sanitation facilities for residents residing close to them and these further present safety challenges for residents who use them for sanitation purposes. Presented on Figure 8 is one of the dangerous wetlands used for sanitation purposes in QQ Section.

Figure 8

Wetland Used for Sanitation Purposes



Additionally, the communal toilets are reported to be the 28 numbers gang hang out spots for selling drugs and robbing people which makes accessing the toilets even more dangerous. While the community, in the beginning had designated people looking after

the communal toilets, the household and focus group respondents shared that these people had to stop looking after the toilets because their lives were threatened by gang members.

Poor maintenance of communal water and sanitation facilities

Even though the CoCT ended up installing taps and communal toilets in QQ Section the toilets are not cleaned. As per the household respondents and respondents from the focus groups, only two people are employed by the CoCT to clean the communal toilets as well as sweep the road in which residents dispose of their human waste. The cleaners clean the area for three days per week which is on Monday, Tuesday and Friday and the other four days they take time off. During this period the toilets are overused especially on weekends and no one cleans them.

On my first visit to QQ Section, which was in October 2017, I managed to speak to one of the cleaners. She claimed that the major problem is that the area is too big to be cleaned by only two people. As stated in the background section of QQ Section, the settlement is 3.7 hectares translating to 37000 square metres with a population of +/-3000 people. As a result, the interviewed cleaner reported that by the time the cleaners reach the toilets they are tired and given that they work a few times a week when they return for duty, especially after the weekend the toilets are filthy.

Moreover, other poor maintenance issues of sanitation facilities in QQ Section are connected to procurement challenges. On my second visit to the settlement which was in 2018 February three months after the first visit, I discovered the work contracts of the cleaners who were previously employed by the CoCT had ended at the end of 2017. The household respondents reported that the toilets had not been cleaned ever since. The new cleaners were supposed to commence their duties in January 2018 after signing their contracts in December 2017. However, the CoCT conflicted with the suppliers of the injection shots needed to protect cleaners from contracting diseases while on duty.

The household respondents and respondents in the focus groups complained that the CoCT fails to fix the toilets. Only one toilet was functional when I was undertaking my fieldwork in QQ Section. Others were either broken or blocked. Moreover, the toilet doors were also reported to be broken and do not lock, the household respondents and respondents in the focus groups claimed that they are forced to show their feet outside while sitting on the toilet seat to show that the toilet is occupied. Figure 9 shows one of the broken and dirty communal flush toilets in QQ Section.

Figure 9

Dirty and Broken Communal Toilet



Complaints were further voiced regarding the poor maintenance of standpipes. As previously highlighted in chapter 5 the standpipes break often and the CoCT fails to fix them on time. The household respondents and respondents from the focus groups further reported that the water pressure is too low especially during weekends, due to the overload in the system since many people are home and doing their house chores during the weekend. In such conditions, only respondents who have illegally connected the water inside their dwellings and yard felt that their water access was better than accessing water from the communal standpipes.

Poor conditions of the formally provided water and sanitation arrangements

As previously highlighted in chapter 5 the toilets provided by the CoCT do not have sanitary disposal bins. In addition, the municipality failed to supply water facilities close

to majority of the toilets. Only the toilets that have four taps attached to them have water facilities.

Given the unsuitable nature of the land on which QQ Section is located, the settlement depends on illegal electricity connections as a result there are no street lights in the area. As highlighted in chapter 5 the sanitation facilities provided by the CoCT are also dark inside without any lighting installed. To be able to see the household respondents and focus groups study participants shared that they use their cell phones to light the way around the settlement and inside the toilets.

Unaffordability and exploitation

The R40-R80 for a 5-litre bucket of water from Q Section which is an increase of over 100% from the R20 they used to pay before the CoCT installed more taps in 2016/2017 is expensive. According to the household respondents, the cost of water is deliberately made expensive by Q Section households to exploit the situation, knowing that residents of QQ Section have no other choice but to pay the high water costs. The household respondents and respondents from the focus groups who use the rented facilities reported that they are constantly reminded by the owners of the facilities that they are below them since they reside in an informal settlement.

Some of the respondents who cannot afford the high prices further shared that when the area has water cuts they are forced to beg to fill a bucket of water from Q Section. As per these respondents before they go and beg for water they have to first prepare themselves for a backlash which may result in conflict, and them not getting any water from the Q Section households.

The poor treatment and exploitation worsen when it comes to rented sanitation services. The price for the use of sanitation facilities can range from anything between R20 per person per use to R200-R350 per month for the whole household. Additionally, the respondents use these facilities argued that on top of the high toilet rentals they are further expected to buy detergents and bags of toilet paper, which are left at the owner of the

toilets' house. The owners of the toilets dictate which brands of detergents to buy, according to the household respondents the brands they are told to buy are always expensive and they are used not only to clean the toilets, but the owners of the facilities use the detergents to clean other areas of their houses. The study household respondents further voiced out that even though the owners and their families also use the toilets but the rules clearly state that only tenants should buy detergents and clean the toilets.

The owners further dictate as to when the tenants can use the toilets, at night the toilets are locked, and the tenants are forced to find other means to relieve themselves. Other rules include being followed to the toilet by the owner to listen and count the number of times one flushes. Under these conditions, the user is charged per flush.

Household intimacy

The use of the bucket for sanitation purposes creates tension inside the household. The household respondents who mainly use the bucket and have males in their households argued that it is not easy having your son or spouse seeing you as a woman relieving yourself in a bucket. These respondents claim that this creates a sense of disrespect and a level of tension in their households. These conditions are reported to worsen when women are in their monthly menstrual cycle. According to the household respondents and respondents from the focus groups, when they are having their monthly menstrual period the men in their households treat them as if they are unclean. They have to continuously endure the backlash and disrespect from the men in their households monthly. This further creates tensions which lead to divisions among household members.

Marlboro South case

6.3 The infrastructural context in Marlboro South

The study respondents shared that during the time they were renting from the slumlords, they also paid for water and sanitation services. According to the respondents, they were unaware that the slumlords were not paying the municipality for the water and sewer services. As highlighted in chapter 5 that in the late 1990s the CoJ noticed that the warehouses were incurring high water bills that were not being paid. This led to the

municipality visiting the area and finding that people were residing in the warehouses. In its quest to get paid for the use of services, the municipality was directed to the slumlords by the building occupants as they were paying for rent and services. The slumlords fled and left the occupants to fend for themselves.

As a result, Marlboro South uses a mixture of formal and informal water and sanitation practices. The majority of the respondents in Marlboro South access water through informal water practices which are mainly illegal connections. The type of illegal connection depends on which warehouse a person resides and what the building rules are. Some respondents reside in warehouses where the illegally connected taps are shared by the occupants who reside in that particular warehouse, in other warehouses the water connections are illegal private connections inside individual dwellings. The shared illegally connected taps range from 1-2 taps shared by +/-200 occupants in each warehouse. Figure 10 shows one of the types of illegal water connections shared by occupants in one of the warehouses in Marlboro South.

Figure 10

Shared Warehouse Illegal Water Connection



The household and focus groups respondents who have illegally connected their water services further claimed that as much as it is not ideal to use illegally connected water, they feel a bit lucky since they did not have to start from the beginning connecting the water services. The main warehouse's reticulation systems are still operational, all they had to do is connect from them.

Furthermore, the household respondents reported that the municipality tried to install water metres and the warehouse occupants found ways to disconnect the metres and reconnect the water illegally. They reasoned that they cannot pay for water used as a communal source, the only time they would agree to pay for water would be if the connections are done privately in each household. Moreover, in some warehouses, the

household respondents have argued that the municipality would go as far as posting water bills amounting to +/- R100 000 with a notice that the occupants owe the municipality and should settle the debt or face water cuts. Respondents claim that they ignore such threats because they know that they will find ways to illegally reconnect their water services. Additionally, as previously highlighted in chapter 5, the formal water practices used in Marlboro South are two communal standpipes installed by the CoJ for the few warehouses where the existing water infrastructure is seriously damaged.

In terms of sanitation services, Marlboro South uses a mixture of formal and informal forms of sanitation practices. The formal practices are thirteen communal shared chemical toilets. The informal forms are mainly illegal sanitation connections, bush and the bucket system. Just like in the case of water, the majority of the warehouses have existing original warehouse sanitation facilities and operational sewer systems which a majority of the warehouses have illegally connected to have sanitation access. While in some of the warehouses the CoJ has either blocked sewer systems from being operational or in other warehouses the toilets have been demolished to make space for new occupants, and in such warehouses the CoJ has supplied chemical toilets. A few of the household respondents who use communal shared chemical toilets claimed to practice open defecation in bushes close to their dwellings or some of their household members use buckets as additional means of sanitation practices mainly at night. Figure 11 shows the types of communal shared chemical toilets used by some of the warehouses in Marlboro South.

Figure 11

Communal Shared Chemical Toilets



Furthermore, the study found that the level and type of sanitation services used in the settlement depends on which warehouse a person resides. The majority of the respondents reside in warehouses that mainly use illegally connected sanitation services. The types of illegal sanitation connections found in Marlboro South are: original warehouse illegally connected toilets shared by the whole building, original warehouse illegally connected toilets inside individual dwellings and illegally constructed and connected toilets shared by the whole building dwellers. Within these types of illegal connections, most of the respondents use the illegally connected sanitation facilities that are shared by the whole building, while the few respondents who claimed to have toilets inside their dwellings have reported having either built their shacks in a section where the main warehouse toilets were placed or the rooms they occupy were previously caretaker dwellings who looked after the building when the warehouses were still fully operational.

Furthermore, other respondents reported to be using illegally shared warehouse sanitation facilities which they have constructed themselves with material that they would have collected from the scrap yard. In such incidences the toilets are built as additional toilets or the warehouses would have originally had toilets, however, due to evictions which are a norm in Marlboro South some of the warehouses had to accommodate eviction victims. In such circumstances, the toilets of the warehouses would have been demolished to create space for the new occupants. As a result, the warehouse occupants would be forced to build a new toilet outside the warehouse.

Insufficient and unreliable water and sanitation access

The types of water and sanitation practices used in Marlboro South are reported to provide insufficient and unreliable access. Given that the standpipes are shared by multiple warehouses, and in each warehouse there are approximately+/- 200 occupants this results in the standpipes being shared by over 200 people. As a result, the household respondents and respondents from the focus groups reported that there are often long queues at the water access points. The respondents claim that they stand for approximately 45min in a queue waiting to fill a bucket of water. The time one spends standing in a queue is reported to be longer over the weekend when majority of the residents are home and doing household chores. The respondents further complained of how some of the warehouse dwellers bring huge containers to collect water, while others allow their friends who have arrived late to jump the queue. These are reported as the main causes of conflict and fighting at the standpipes. Standing in long queues to use facilities are also experienced with the communal shared chemical toilets. The respondents complained that the thirteen chemical toilets are insufficient to cover over 200 people, and it is a struggle when one urgently needs to use the facilities.

Just like the formally provided standpipes and chemical toilets, the illegally connected warehouse shared toilets and taps are few to be used by +/- 200 warehouse dwellers. As a result, the household respondents and respondents from the focus groups who use these types of services complained that there are always long queues at the access points. Only respondents who have illegal water and sanitation inside their dwellings do

not complain of such issues. However, both groups of respondents that use the shared warehouse facilities and those that have access inside their dwellings complained of unreliable access. According to these respondents, the municipality often cuts the water off. During these periods all those warehouses that use illegal connections have to go without water and have to collect water from Alexandra Township for days and sometimes weeks until they reconnect again. To walk to Alexandra to collect water takes 45min-1hour.

Inconvenient and unsafe water and sanitation access

The study respondents who access water through communal shared standpipes and those using communal chemical toilets argue that such practices are placed far away from the warehouses. It takes approximately 20min to walk to the standpipes and +/-30min walk back due to the heavy water containers carried on the way back from the access points. Furthermore, the respondents who use chemical toilets claim that the toilets are placed in unsafe sections and some are placed far from the warehouses. The furthest distance to some of the toilets from the warehouses is approximately 40min. Given the unsafe nature of the settlement the respondents further reported that the use of open defecation presents further safety challenges.

Maintenance of water and sanitation facilities

Respondents who use the communal shared standpipes complained of how the CoJ never adhered to the calls when the standpipes are broken. The standpipes are reported to break easily especially given that they are located in the middle of the road where many people commute and who are not necessarily staying in the warehouses for which the standpipes are meant, anyone can use the standpipes. When the standpipes are broken it is the warehouse occupants who are forced to fix them as they do not have other alternative water sources.

The study respondents who use chemical toilets complained that the municipality does not come often to clean the toilets and other respondents complained that the chemicals used to clean the toilets are harsh.

Given that a majority of the respondents in Marlboro South claimed to use informal practices, such as shared illegally connected water and sanitation facilities, the responsibility of fixing these types of facilities lies with the occupants in each designated warehouse. When water and sanitation infrastructure is broken the building committees are meant to collect money from each of the warehouse occupants to fix the infrastructure. The amount each person pays depends on the cost of the material and labour needed to fix the broken infrastructure. This comes with challenges, as shared by the household respondents who use such informal arrangements that in many instances some of the occupants do not want to take responsibility for fixing the infrastructure. These conditions are worse in the warehouses where men had used patriarchy and tribalism to occupy power positions.

Furthermore, sharing toilets with +/- 200 people inside a warehouse is a problem when it comes to cleaning responsibilities. Findings show that in the few warehouses which have building committees there is a written timetable as to who is responsible for cleaning the toilets, and on which days of the week. However, the majority of the warehouses without building committees do not have any timetable of the shared responsibilities. As a result, there are no designated people selected to ensure that the building and toilets are cleaned. Furthermore, in warehouses where there are men who have forced themselves into power positions, the respondents shared that patriarchy and tribalism are used when it comes to sanitation cleaning responsibilities.

Poor conditions of water and sanitation facilities

According to the household respondents and respondents from the focus groups, the chemical toilets provided by the CoJ do not have sanitary disposal bins and there are no water facilities provided close to the toilets. Moreover, the respondents complained that the facilities do not have lighting inside, they use their cell phones to light inside the toilets in the evening.

Just like the communal chemical toilets used in Marlboro South, the shared illegally connected sanitation facilities also do not have water facilities close to the toilets. The warehouse respondents had to move the taps outside due to the flooding they caused inside of the warehouses. Furthermore, other respondents argued that the taps had to be moved since it was challenging to collect water inside a dark warehouse and this further caused overcrowding inside due to warehouse dwellers who had to queue for water.

Other similar challenges to the chemical toilets were that the warehouse shared toilets also lacked sanitary disposal bins and there are no windows and lighting inside the warehouse toilets. The toilets are very dark even during the day, and cell phones are used at all times for lighting inside the toilets.

Household intimacy

The use of a bucket inside the dwellings negatively affects the relationships at the household level. Given the small nature of the dwellings in Marlboro South which range from 8m2 to 25m2 the 49% of household respondents in Marlboro South reported that they reside in household sizes with 4-7 people and there is no privacy in the dwellings. The use of the bucket for sanitation creates challenges at the household level. In some of the households men dictate who can and cannot use a bucket for sanitation. In these households only little children who have not reached their puberty stages are allowed to use buckets in the dwelling.

6.4 Infrastructural analysis of water and sanitation in QQ Section and Marlboro South

In terms of the infrastructural arrangements in which water and sanitation are accessed, this study reveals that the water and sanitation arrangements have been shaped differently by the nature, form and character of each of the two case study informal settlements. Through the two informal settlements this study reveals that when it comes to water and sanitation provision in informal settlements the distinction between state-owned and private-owned land determines/defines supply. Given that the land on which QQ Section is located is state-owned land, as discussed in chapter 3 where the

characteristics of the settlement are outlined, it was easier for the CoCT to provide the area with the communally shared taps and the communally shared flush toilets.

In Marlboro South the conditions differ and they are more complex than in QQ Section. Unlike QQ Section, which needed new water and sanitation infrastructure to be installed, Marlboro South already has existing water and sanitation infrastructure. However, as presented in chapter 3 where the characteristics of the settlement are given, the dwellings in Marlboro South are situated inside and outside around warehouses that are private-owned by different owners. As a result, the CoJ cannot formally reconnect the settlement to the water reticulation system and sewer system without the concern of the rightful owners of each of the warehouses. Scholars such as (Evans, 2007; Sjöstedt, 2008) highlight the difficulties in providing services to settlements located on private land, as in the case of Marlboro South. The scholars argue that the provision of the services can be perceived as a way of encouraging land invasion, and this can be further perceived as a form of acknowledgement or recognition of the informal dweller's rights to the land by the government.

While land tenure determines the provision of water and sanitation, the findings of this study further show that the quality and quantity of the infrastructure is determined by the nature of the land on which the settlement is located and the nature of the settlement. Given that QQ Section is located on land with servitudes and is dense these factors present technical difficulties for the installation of water reticulation systems and sewer systems. This further presents challenges for the CoCT to provide the area with water and sanitation facilities that are sufficient to cover the whole settlement and facilities that are located in convenient sections of the settlement. These views were further shared by the CoCT DoHS interviewed official who claimed:

> QQ Section is very dense, it is located on the main road with reticulations, drains, electricity lines and the water table in the area is too high. Therefore, connecting the area to existing infrastructure is a challenge. To add to that by law we are not supposed to install services on land with servitudes, but due to social challenges,

> we are forced to. The settlement itself needs to be moved for the CoCT to provide proper water and sanitation services (CoCT DoHS official, personal communication, 6/03/2018).

As a result, among other challenges, these form part of the reasons why QQ Section has to further substitute the formally provided facilities with informal arrangements. The informal arrangements mainly include: illegal water connections that supply unreliable access, the bucket system that affects household intimacy, open defecation that presents safety challenges and rented water and sanitation services which open users up to ill-treatment and exploitation.

Unlike QQ Section in which water and sanitation provision is affected by the dense nature of the settlement and the servitudes in the area, in Marlboro South formally provided water and sanitation is further affected by the settlement being located in an industrial area. This serves as a health hazard for informal settlement dwellers. As a result, if the CoJ would provide the whole area with formal water and sanitation facilities the municipality risks contravening the law. Provision of these services can be interpreted as approval from the CoJ that the occupants can reside in the industrial area, while fully knowing that this has daunting implications on people's health. As such, the CoJ can be held liable for the lives of those residing in the warehouses.

However, the water and sanitation policies and laws on the other hand obligate the municipality to provide the residents with water and sanitation. This is where this study highlights the tensions and dilemmas created by the policy environment for municipalities. Even though the CoJ tried providing certain sections of the settlement with interim services such as chemical toilets and standpipes, these services are insufficient to cover the whole settlement. Hence, the majority of the warehouses in Marlboro South use informal water and sanitation arrangements, such as illegal connections, that are connected to the original warehouse infrastructure as their main sources. These arrangements further present unreliable access and maintenance challenges. Furthermore, the challenges presented by the main formal and informal water and

sanitation sources are the main reason the settlement use additional sources. These mainly include: the bucket system that affect household intimacy, open defecation and the collection of water from Alexandra Township, which is time consuming and presents safety challenges.

The challenges for water and sanitation infrastructure development resulting from the unsuitable nature of the land on which informal settlements are located on, the growth and dense nature of the settlements are clearly outlined in the literature. As argued by (Dagdeviren and Robertson, 2011; UN-Habitat, 2003) informal settlement dwellers either invade land at the edge of urban areas, land with servitudes, which is often prone to flooding, land located on steep hillsides, land that is in proximity to industrial plants with toxic emissions or waste disposal sites. Bakker (2008) refers to the growth of the settlement, which results in overcrowding. All these characteristics make the installation and expansion of water network utilities and sewer systems difficult (Isunju et al., 2011) as also demonstrated in QQ Section and Marlboro South.

While literature further discusses the complications of water and sanitation provision presented by lack of tenure (Evans, 2007; McGranahan, 2015; Rubin, 2011; Sjöstedt, 2008) what seems to be missing from these debates is the distinction between state-owned and private-owned land and how these affect water and sanitation provision in informal settlements. This study shows that even though informal settlement dwellers do not have tenure on the land they reside but settlements that are located on state-owned land are in a better position of being provided with formal water and sanitation services than settlements located on private land.

Therefore, this study shows that a more differentiated approach is needed when it comes to dealing with water and sanitation infrastructural development in each settlement, as these settlements are not the same and should be treated differently. The differentiated approach should consider land tenure and ownership factors, the nature of the land and the nature of the settlement as they are key to water and sanitation provision in informal settlements. The differentiated approach should feature at the national policy level as well

as in municipal by-laws, to accommodate the complexities created by these settlements for water and sanitation infrastructural development.

6.5 Conclusion

This chapter presented an outline of the infrastructural arrangements within which water and sanitation services are accessed in both QQ Section and Marlboro South. This chapter showed how the different factors related to land tenure, nature of the land and the nature of each settlement affect water and sanitation services. As such this chapter gave an outline of the formal and informal forms of water and sanitation practices used in each of the two settlements. This chapter further provided discussions on the type of access presented by the types of water and sanitation practices used in the two settlements. In this regard factors such as: insufficient and unreliable access, inconvenient and unsafe access, poor maintenance of facilities, poor conditions of formally provided facilities, unaffordability and exploitation, and household intimacy were outlined in QQ Section. In Marlboro South the chapter outlined insufficient and unreliable access, inconvenient and unsafe, maintenance issues, poor conditions of formally provided facilities and household intimacy as key factors related to the type of access experienced through the infrastructural arrangements.

CHAPTER 7
GENDER IMPLICATIONS OF THE INSTITUTIONAL AND INFRASTRUCTURAL ARRANGEMENTS ON WATER AND SANITATION ACCESS

7.1 Introduction

The previous two chapters presented findings and gave a comparative analysis of the institutional and infrastructural arrangements in which water and sanitation are accessed in both the settlements. How the institutional and infrastructural arrangements have affected and framed water and sanitation has gender implications, with women being the gender group most affected. This chapter presents a comparative analysis of the gender implications, which result from the ways in which the institutional and infrastructural arrangements have affected water and sanitation in the two informal settlements. Thus, presented in this chapter are discussions around the key emerging themes such as: safety, health and hygiene, maintenance of water and sanitation facilities, gender-based discrimination at the household level and marginalisation of women resulting from not having private connections to water and sanitation infrastructure.

7.2 Safety as a challenge on women's water and sanitation access

Safety challenges concerning water and sanitation services emerged as one of the leading challenges that women face in terms of access in the two settlements. Given the general unsafe nature of QQ Section and having communal and rented water and sanitation facilities that are located far from dwellings put women's lives at risk. The household respondents and respondents from the focus groups in QQ Section complained of the unsafe nature of the settlement even for people who are inside their dwellings. Conditions are far worse for women who have to walk long distances to access water and sanitation facilities, they fear being attacked on the way to and from the facilities as well as inside the communal toilets.

Furthermore, the wetlands in QQ Section worsen the unsafe conditions. The women that reside close to the wetlands complained of the way criminals often attack people, murder them and dump their bodies inside the wetlands. When the women leave their dwelling

to get water or to access sanitation facilities they have to constantly check that there are no strange and unusual people walking close to their homes and they have to ensure that they are not being followed. These challenges were further reported by the study respondents who practice open defecation in QQ Section. The practice of open defecation has been a key factor in many of the lives that were lost in the settlement. According to the household respondents and respondents from the focus groups, bodies of people who were using the wetlands to relieve themselves have been found inside the wetlands weeds. The women respondents claimed that thugs sexually assault, strangle and stab women inside the wetlands. As a result, the practice of open defecation is reported as one of the main causes of lives that were lost in the settlement.

As shared by one of the women respondents in QQ Section:

> The area is unsafe, and there are high expectations of a person being attacked at any given time. Thugs are not scared to go inside the shacks even during the day and assault you that is why you see most of the shacks have burglar bars. So can you imagine the risk I have to take every time I leave my shack to collect water or to use the communal toilets, I might not even return home (QQ Section Respondent 3, personal communication, 5/02/2018).

Similar safety challenges associated with the distance to access water and sanitation facilities and the practice of open defecation were also found in the case of Marlboro South. The household respondents and respondents from the focus groups who use chemical toilets and standpipes in Marlboro South complained of the long distance to these access points, which have resulted in some of the women being assaulted and robbed especially at night. Furthermore, some of the women in Marlboro South reported how they had been previously left by their male spouses due to the use of the bucket for sanitation inside the dwelling. This has resulted in the women risking their lives by using the bush to relieve themselves to save their relationships. One of the respondents claimed:

> We face so much disrespect from the men in our households for using a bucket in the house. I lost two relationships because of using the bucket. As unsafe as it is,

> I now go out to relieve myself in the bush close by our building because the chemical toilets are too far. By doing this I save myself from being insulted or dumped by my man for using the bucket. I have been robbed attacked more than once and they took my phone this one time on my way to use the bush (Marlboro South Respondent 11, personal communication, 9/04/2018)

Additionally, issues of lack of lighting around the settlement and inside the communal toilets were reported as presenting further dangers at night in QQ Section. The women are forced to use their cell phones for lighting, which opens them up to further danger of being assaulted and robbed of their cell phones. This seems to be the issue in Marlboro South as well, women who use chemical toilets complained that the toilets do not have lighting inside and they are very dark at night. Moreover, in Marlboro South the majority of women who use informal sanitation practices, such as shared illegally connected warehouse toilets, also complained that the toilets are unsafe. According to the women, the toilets are very dark even during the day because there are no windows and lighting inside. As a result, women are prone to attacks when accessing the chemical toilets at night and when accessing the toilets within the warehouses during the day and at night. Just like in QQ Section the women also use their cell phones for lighting, which makes them vulnerable to more assaults and robberies.

While the two settlements have these similarities, the study findings show that there are further safety water and sanitation challenges that are mainly specific to the case of QQ Section and not found in the Marlboro South case. These are mainly connected to the challenge of gangs and poor maintenance of communal sanitation facilities which seem to present huge safety concerns in QQ Section. As presented in chapter 6, the communal toilets in QQ Section are situated in an area where gang members frequently hang out. As further shown in the findings that the toilets themselves are used by gangs to sell drugs and commit different kinds of criminal activities. Given that the majority of the toilets are broken with doors that do not lock from the inside makes safety conditions worse for women. Due to these conditions, women in the QQ Section find themselves at constant risk of sexual assault. As they have claimed in the findings that before leaving their

dwelling to go to the toilets they have to be on constant alert to ensure that they are not followed before they can use the communal toilets. They have to check that none of the gang members are around the facilities or have seen the woman enter one of the facilities.

Thus, these two cases seem to confirm what has been written in literature dealing with gender and safety in water and sanitation access in informal settlements as reviewed in chapter 2 of this study. Feminist literature emphasise issues related to distance to the water and sanitation facilities, inconvenient locations where facilities are placed, gender-neutral sanitation facilities facing footpaths and the poor maintenance of the facilities with broken doors as the main factors placing women in unsafe conditions in terms of water and sanitation access (Corburn & Hildebrand, 2015; Kwiringira et al., 2014; Mcilwaine & Chant, 2013). Thus, challenges highlighted in the feminist literature together with case-specific challenges such as gang activities which were highlighted in the QQ Section case seem to be key leading factors associated with safety challenges women face in urban informal settlements.

As a result, to minimise women's safety challenges to water and sanitation access in informal settlements, when installing water and sanitation facilities government power institutions and service providers should focus beyond infrastructure provision. Issues related to women's safety should form part of the decision making process. In settlements such as QQ Section that present challenges for the installation of water reticulation systems and sewer systems, and settlements such as Marlboro South that are located on private property in an industrial area, consideration of other forms of infrastructure should be given. These services should be provided until the settlements are relocated or rezoned and upgraded. These include water tanks and PFT's which do not require complex technical infrastructure systems for QQ Section. In Marlboro South, the municipality can increase and install more communal standpipes close to the warehouses and just like QQ Section the CoJ can further supply the area with PFT's for sanitation access for women, especially at night inside their dwellings. These infrastructures will assist in minimising the safety challenges women face in the settlements.

However, such decisions should be made with the involvement of the community, where all community members including men are educated regarding the advantages of such infrastructure and why other forms of infrastructures are not suitable for the settlements. Furthermore, municipalities and service providers should play their part by ensuring that the PFTs are collected and emptied on time and the water tanks are cleaned and always filled with water. This will increase the confidence of informal settlement dwellers on government institutions in taking care of their water and sanitation needs, further dealing with situations such as what happened in settlements such as QQ Section, where installation of other forms of sanitation either than flush systems were rejected by the settlement.

7.3 Health and hygiene challenges

Challenges related to sanitation hygiene such as the lack of available sanitary disposal bins and water amenities close to sanitation facilities were reported as contributing to the health and hygiene challenges faced by women in both settlements. Without having sanitary disposal bins, women in both settlements either dispose of used sanitary towels on the floor or flush them down the toilet. These conditions verify the argument made by Joshi et al. (2011) that formally provided communal shared sanitation facilities do not have sanitary disposal bins, resulting in most of the used sanitary products being disposed of in bushes and open areas where people commute daily. This creates further complications, especially in an informal settlement such as Marlboro South where dwellings are also situated inside enclosed warehouses. Flushing sanitary towels causes blockages in the toilets resulting in human waste flooding people's dwellings, causing further health hazards. While in the QQ Section the flushed sanitary towels have been a cause of human waste flooding the streets where people commute daily, further causing environmental health hazards. Furthermore, in both settlements the women complained of how men are often inconsiderate when using the shared sanitation facilities, the men often leave the facilities in an unpleasant state with urine all over the toilet seats and on the floor and sometimes the human waste is not flushed. Using dirty facilities further present health risks for women.

Furthermore, menstrual hygiene requires women to have water facilities that are close to sanitation facilities, yet, in both the case studies such facilities are lacking. This results in poor menstrual hygiene practices and this has been reported as a challenge for women's self-esteem, as they are forced to go out in public without properly cleaning themselves after using sanitation facilities during their monthly menstrual period. The lack of water facilities close to the sanitation facilities has further resulted in the poor practice of handwashing after using the toilet in both settlements. This is a great concern especially given that women are mainly caregivers in their households. The poor practice of handwashing after using sanitation facilities can result in the transmission of diseases, particularly now that the world is faced with the deadly Covid-19 pandemic. Hence, Corburn and Hildebrand (2015) argue that there is a need for gender-sensitive sanitation facilities with water sources placed close to the facilities in informal settlements to cater for the specific needs of women.

In light of these findings, this study coincides with the views of feminist scholars such as (Corburn and Hildebrand, 2015; Joshi et al., 2011; Sweetman and Medland, 2017) who highlight the health and hygiene challenges faced by women residing in informal settlements. The scholars' main argument is how women's bodily functions which include menstruation and pregnancy and their aftermath require water and sanitation facilities that accommodate their specific needs (Sweetman & Medland, 2017). As a result, this study shows that government, service providers and CSO power institutions that work in the water and sanitation services delivery spectrum should ensure that health and hygiene are prioritised when water and sanitation facilities are provided in informal settlements. This includes the provision of facilities that cater for the needs of women such as facilities with sanitary disposal bins and water facilities that are situated close to the sanitation facilities.

As further argued in the National Sanitation Policy of 2016 that municipalities and service providers often do not offer sanitation hygiene education or they either do it haphazardly when providing sanitation services on the ground (DWS, 2016). Hence, this study shows that sanitation access should focus beyond the availability of facilities and educate both

men and women in informal settlements regarding health and hygiene issues especially given that informal settlements mainly use shared facilities by both gender groups (Joshi et al., 2011; Sahoo et al., 2015).

7.4 Maintenance of water and sanitation arrangements as challenges for women's access

Challenges related to the maintenance of the different types of water and sanitation arrangements emerged as one of the key issues affecting women's access to water and sanitation in both settlements. Given that the municipality fails to ensure that the formally provided standpipes in QQ Section are regularly fixed women complain that they are forced to use the rented facilities or beg for water from Q Section. These conditions put women at a disadvantage as they have reported having been exploited and bullied by the owners of the infrastructure. While the lack of maintenance of shared communal flush toilets in QQ Section is reported by the women household respondents and the respondents from the focus groups as a key cause of the infections they contract due to using dirty toilets. While in Marlboro South women complain that they contract infections from the poor maintenance of the chemical toilets. These challenges coincide with the views of SERI (2018) in chapter 2 in the literature debates. SERI claims that state provided communal sanitation arrangements in informal settlements are either not cleaned often or not cleaned at all.

The Marlboro South household respondents and the respondents from the focus groups further shared that on the few occasions in which the toilets are cleaned harsh chemicals are used. The women felt that the chemicals have negative health implications on their bodies. The issue of harsh chemicals was highlighted in chapter 2, where women raised concerns on the impact of the chemicals used to clean sanitation facilities in a study conducted by SAHRC (SAHRC, 2014). In Marlboro South, the poor maintenance of standpipes by the CoJ result in financial burdens for the women who use these arrangements. The women who use such arrangements complain that the standpipes are placed on the road where even people who do not stay in the warehouses can access them. As a result, the women report that the standpipes break often and the municipality

never goes to the settlement to fix them, which forces the women to use their last cents to fix the standpipes as this is their main water source. Similar conditions of poor maintenance of the frequent broken and blocked toilets, pipes and taps, and issues of accountability in fixing the infrastructure are reported by (Hawkins et al., 2013; SAHRC, 2014) to be some of the key challenges further widening gender-based inequalities in access to water and sanitation services in informal settlements.

Furthermore, women who use informal sanitation arrangements such as the rented sanitation facilities at QQ Section, complain that maintaining such arrangements result in financial constraints. Given that the women in QQ Section are forced by the owners of the facilities to purchase specific expensive brands to clean the rented sanitation facilities, this shows levels of exploitation as a majority of the time the women cannot afford to buy the detergents. As outlined in chapter 5 that the 57% of the household respondents which reside in households with someone employed, the income average of R2500 is insufficient to take care of the household needs and pay for rented water and sanitation. Especially given that the majority of the household respondents reside in households with 4-7 people, and 53% out of the 70% of women single-headed households have children who have school and other needs as highlighted in the characteristics of study respondents in chapter 5. As a result, paying for the expensive detergents present further challenges in terms of access and affordability. The unaffordability results in the women being blocked from using the facilities.

In Marlboro South the situation differs, the maintenance of illegally connected shared warehouse sanitation facilities results in the widening of gender-based inequalities, mainly caused by high patriarchal practices which persist in the settlement. When it comes to maintaining shared warehouse water and sanitation facilities women are oppressed by men who use patriarchy and tribalism to ensure that the warehouse taps are functioning, while further forcing women to clean the shared warehouse toilets or risk using dirty toilets. The case of Marlboro South supports the view of Sultana (2012), who describes the patriarch as the man decision-maker who controls who performs what duties and chores in the household and communities. Sultana (2012) further claims that

patriarchs dominate, control, and they are the authority figures and decision makers within their families and communities as shown in the Marlboro South case. As such in Marlboro South the unequal gender dynamics highlight the need and importance of the SDI gender-inclusive approach. The SDI gender-inclusive approach was the main reason for the shared responsibilities between men and women in maintaining water and sanitation infrastructure at the warehouse level. SDI ensured that patriarchy and tribalism did not form part of the community leadership structures, instead community leadership structures were formed around equal gender inclusivity which assisted in ensuring that women's water and sanitation needs including maintenance of the facilities were considered at the warehouse level.

These two cases demonstrate that even if the main arrangements used are formal or informal, women will continue to suffer unless government institutions step up and take responsibility for maintaining the formally provided infrastructure. This will improve the access women have to formally provided services. Thus, ensuring that women have improved access to water and sanitation services and will not be forced to use informal arrangements which result in exploitation and oppression when it comes to maintenance.

Moreover, while feminist literature makes key arguments on the challenges women face due to the poor maintenance of shared water and sanitation facilities, the arguments mainly focus on formal government provided shared facilities (Chant, 2013; Duflo et al., 2012; SAHRC, 2014; Tacoli, 2012). As argued in the literature the failure of the state and private entities in cleaning formally provided communal shared facilities the majority of the time the women carry the burden of ensuring that the communal sanitation facilities are clean and well managed (Tacoli, 2012). This study goes beyond the focus of maintenance issues resulting from formally provided water and sanitation arrangements on women. This study further reveals the maintenance challenges women grapple with when using informal forms of water and sanitation arrangements which literature fails to highlight. As presented in the two cases and literature that when shared facilities are provided by government institutions, there is the expectation that the maintenance responsibility lies with the government. However, when informal facilities are shared the

expectations and responsibility of fixing and maintaining them automatically falls on women. This is an important aspect that feminist literature needs to tackle.

7.5 Gender-based discrimination at the household level

Women face gender-based discrimination concerning water and sanitation access at the household level. The use of informal arrangements such as the bucket for sanitation purposes results in gender-based discrimination against women at the household level in QQ Section. Males in general at the household level in QQ Section fail to recognise the different sanitation needs required by women. As a result, the women household respondents in QQ Section reported that they are often disrespected with their human dignity diminished for using a bucket for sanitation purposes inside the dwelling by males in general. The discrimination worsens when they are having their monthly menstrual period. According to the women household respondents the males in their homes perceive them as unclean when they are having their menstruation periods. The use of the bucket makes these conditions worse as the women are demeaned and made to feel inferior. As a result, to avoid the levels of emotional abuse for using a bucket, some of the women reported that they ask men to accompany them to the communal or rented toilets in the evening. The women claimed that this further creates more tension and divisions within the household. All these challenges in QQ Section emerge from the poor understanding and sometimes ignorance of men regarding the different biological functions that women possess that require specific sanitation needs.

Whereas in Marlboro South the gender-based discrimination regarding water and sanitation access women face at the household level is more structured around patriarchy and unequal gender power relations. The practice of patriarchy, which has created unequal gender power dynamics at the household level has allowed men to dictate how women relieve themselves. As shown in the findings that in most instances only little children are allowed to use the bucket. Some household respondents shared how their male spouses disrespect them and some shared how their relationships ended due to their spouses witnessing them use a bucket to relieve themselves when they are having their menstrual period or when they have a running tummy. Men at the household level

in Marlboro South do not only dictate who is allowed to use the bucket inside the household, they further expect women to ensure that there is water available in the household at all times. The women household respondents claimed that this is a challenge, especially given the unreliable water supply from the illegally connected taps and the municipality provided standpipes.

This study, therefore, agrees with the debates around the gender-based discrimination associated with water and sanitation women face at the household level. Scholars such as (Geertz and Iyer, 2018; Sultana, 2012; Tacoli, 2012; Willan et al., 2020) mainly highlight how cultural beliefs, practices and patriarchy have been a major hindrance to women's water and sanitation at a household level in African societies. The case of QQ Section highlights the views of Tacoli (2012) who claims the cultural beliefs around menstruation which also result from the ignorance and lack of understanding of women's specific bodily functions by males have affected women's sanitation access at the household level. Men at the household level restrict women from using the bucket for sanitation purposes because of social norms and taboos related to menstruation (Geertz & Iyer, 2018). The conditions in Marlboro South support Willan et al's, (2020) view that in South Africa the dominance and control over women by men that further widen gender-based inequalities are created socially within the patriarchal system with women often forced to embrace and accept the power men have over them.

Hence, to deal with such challenges, government power institutions and CSOs which work in the service delivery spectrum in informal settlement communities should educate informal settlement dwellers around women's specific water and sanitation needs as also highlighted under the health and hygiene section. More importantly, the government should ensure that women in informal settlements have improved formal water and sanitation arrangements that take into account women's specific sanitation needs. Without such arrangements, women will continue suffering as they are continuously forced to use informal arrangements which open them up to gender discrimination within their households.

7.6 Marginalisation of women resulting from not having private connections to water and sanitation arrangements

The lack of privately connected water and sanitation arrangements result in the marginalisation of women in informal settlements. In the QQ Section not having private water and sanitation connections have resulted in exploitation, ill-treatment and the degrading of women who use informal rented water and sanitation arrangements by the owners of the arrangements. The QQ Section household respondents reported that they are undermined and exploited by Q Section residents. Given that the residents in Q Section reside in a formal area with yard toilets and taps they perceive their socio-economic background and themselves much better and superior to QQ Section residents who reside in an informal settlement without proper water and sanitation services. As such the household respondents reported that the Q Section residents use their better socio-economic position and powers of owning infrastructure as weapons to ill-treat and exploit them by asking high prices for using the services and asking them to buy expensive detergents to maintain the sanitation facilities. As discussed in the previous section highlighting maintenance challenges that the R2500 income is insufficient to cover household needs and pay for expensive rented water and sanitation and the maintenance of the rented facilities in QQ Section.

Furthermore, women in QQ Section have their human dignity diminished by Q Section residents who follow them to the toilet to count the number of times they flush to charge them per flush. When using sanitation facilities people require privacy and being followed to the toilet shows levels of disrespect and abuse which result in QQ Section women's human dignity being diminished by the Q Section owners of the rented sanitation facilities.

Even though the women in QQ Section use their last cents to pay for rented services, and have their human dignity diminished, they further endure the ill-treatment of having the facilities locked. While the exploitation and ill-treatment are not gender bound, it is women in QQ Section who are mostly affected. Considering the issue of sanitation, the women who rent these facilities are highly dependent on them. Unlike men who can use other forms of sanitation arrangements such as open defecation without getting too much

backlash, it is not easy for women to use these forms of arrangements as they are judged and these further present safety challenges. As a result, women are more affected than men by the exploitation and conditions that affect their human dignity presented by the rented water and sanitation arrangements.

Women who have better water access in QQ Section are those who have illegally connected the water inside their dwellings and outside their shacks. The only time such women face access challenges is during the weekend when there are water cuts due to the overload in the water reticulation system.

Thus, this case shows how unequal urban areas are further reproduced by local political factors linked to class at the community level over water and sanitation services. Where those who hold power (owners) over water and sanitation facilities exploit and undermine those without power (users) due to their socio-economic background. These socio-economic differences result in the continuous production of new unequal urban social and physical environments.

However, the Marlboro South case differs from the QQ Section case when it comes to the marginalisation of women due to the lack of private water and sanitation connections. Women in Marlboro South face challenges at the community level due to shared forms of both formal and informal arrangements. The insufficient nature of the water and sanitation facilities in Marlboro South result in women wasting their time standing in long queues to access the facilities. Furthermore, the household respondents and respondents from the focus groups reported that sharing two formally provided standpipes and two illegally connected taps with +/- 200 people per warehouse results in conflict between women that arises when standing in long queues at the water access points. Other challenges women face in using shared facilities arise when it comes to maintenance responsibilities of the water and sanitation arrangements. As previously noted that women at the warehouse level are forced by men to maintain shared water and sanitation arrangements at their own cost and time. The case of Marlboro South shows that access to water and sanitation

for women in informal settlements results in constant local political negotiations emerging from community conflicts and patriarchy.

Furthermore, while women using shared water and sanitation facilities face maintenance challenges and conflicts at access points, women residing in warehouses with illegally connected water and sanitation in their private dwellings, do not face any of the challenges. Thus, just like in QQ Section women who have illegal private connections mainly face access challenges when there are water cuts. These women are in a far better position in terms of access than women using shared facilities in Marlboro South.

By highlighting the different challenges the women face in using rented facilities due to the lack of private water and sanitation access the QQ Section case study validates the views of (Cheng, 2014; McGranahan and Satterthwaite, 2006; Swyngedouw, 2006). The scholars argue, unlike the government which is not profit-driven informal vendors operate as private businesses which aim to make profits and without proper regulations governing such vendors, they overcharge, under-provide, and ignore the benefits of water and sanitation services. The QQ Section case further highlights the arguments made by (Cheng, 2014; Peloso and Morinville, 2014) that in informal settlements where informal water vendors are the main water source, water access is mediated by informal political negotiations between the water services provider and the users which in most cases are women. These informal political negotiations often possess unequal power dynamics which have far-reaching implications for shaping networks of access.

While the Marlboro South case study mainly confirm the views of (Chant, 2013; Ramírez and Sañudo-Fontaneda, 2018; SERI, 2018) that without private water access women are forced to stand in long queues at communal shared water facilities where they may also have to compete with one another further resulting in conflict and stress. Scholars such as (Hawkins et al., 2013; Duflo et al., 2012; Tacoli, 2012) further highlight maintenance challenges women face when they do not have private water and sanitation access and are forced to use shared water and sanitation arrangements, which this study also highlighted through the Marlboro South case study. These scholars claim that women

carry the burden of maintaining shared sanitation facilities. As a result, when communal shared facilities are dirty women tend to be implicitly and sometimes explicitly blamed for failing to maintain high standards of cleanliness.

In the light of these challenges this study shows that where it is not possible to provide informal settlements with private yard water and sanitation provision as per the highest step presented in the water ladder (Loughnan et al. 2017) in the policy context in chapter 4, government institutions should relocate, rezone and upgrade the settlements. This especially applies in situations such as those shown in this study where land has been found and the settlement has been promised to be relocated and in settlements in which upgrading and rezoning are possible. As a result, government should aim towards the provision of private yard connections for settlements such as QQ Section that are located on open land and private inside dwelling connections for settlements located inside and outside buildings such as Marlboro South. This will ensure that women have secure water and sanitation access. Household members will share these facilities instead of having to use communal shared facilities, further ensuring that women are not marginalised when accessing such services.

As a result, this study shows that when it comes to women's water and sanitation access in informal settlements multiple factors affect women. Hence, to deal with such factors it is important for the institutions of power that work with informal settlement communities to ensure that gender forms part of the criteria in all water and sanitation projects that are implemented in the settlements. Furthermore, there needs to be harsher consequences when institutions of power fail to put the water and sanitation needs of the settlement, particularly the needs of women before the needs of individuals and the institutions. Moreover, government power institutions need to ensure that when dealing with water and sanitation infrastructural development in informal settlements a differentiated approach should be applied to suit the specific needs of the individual settlements as previously highlighted in chapter 6.

7.7 Conceptual significance

The use of an augmented FUPE framework has been key in showing how water and sanitation access for women in urban informal settlements in developing countries such as South Africa are negotiated through social and political processes. These include processes such as power, class, culture and social relations, which simultaneously intersect with ecological approaches such as the natural environment (Sultana, 2011). Chapter 5 outlined how the institutional arrangements have affected water and sanitation in the two case studies. Using the FUPE framework as the guiding tool in this study has managed to highlight the gendered implications of the effects of the institutional arrangements which were outlined in chapter 5 on women's water and sanitation access.

At government level political dynamics at the municipal and ward levels were at the centre of the decisions made by political figures to provide sanitation facilities that lack lighting and sanitary disposal bins, unmaintained water and sanitation facilities and lack of water amenities close to the toilets in both settlements. The FUPE framework helped in highlighting how these factors result in the use of unsafe facilities by women due to lack of lighting and using facilities with broken doors due to poor maintenance particularly in QQ Section. Furthermore, the FUPE assisted in clearly showing the inability of women to practice good health and hygiene, due to the lack of water amenities close to the toilets. The FUPE enabled to show how the women in the settlements had their health negatively affected from using dirty facilities and how they carry the financial burden of fixing broken shared infrastructure, due to poor maintenance of the facilities. In addition to these failures, the FUPE assisted in showing how the lack of prioritisation of gender by government institutions further led to the provision of facilities that are located in unsafe locations in Marlboro South. In this regard, the FUPE made it possible to show how water and sanitation services are used by political figures to drive their political interests and for political power accumulation resulting in further marginalisation of women in terms of water and sanitation access in urban informal settlements.

At the CSO and community leadership levels chapter 5 outlined how power was used by the organisations and the representatives for their benefit, and further affecting water and

sanitation in the two informal settlements. The behaviour of the representatives and leaders of the CSO and community leadership institutions in the two settlements highlight issues of misconduct and capital accumulation as per the Marxist approach to power. As highlighted in QQ Section that the ABM representative who also held the position of a community leader in the settlement started abusing his powers once there were donor funds involved. As a result, his focus shifted from ensuring that the settlement acquired water and sanitation to him misusing donor funds for his personal interest and further blocking the settlement from being relocated. These issues resulted in QQ Section forfeiting its relocation opportunity which would have resulted in improved water and sanitation access.

In the Marlboro South case capital accumulation was highlighted by how SDI failed to account for donor funds, which were meant to assist the settlement in acquiring the warehouses for the upgrading and rezoning process. At the community leadership level, capital accumulation was highlighted by the way that the MWCC community leaders built and rented out shacks in the warehouses for their financial benefit. These factors resulted in Marlboro South forfeiting its rezoning and upgrading opportunity. Thus, blocking the delivery of improved water and sanitation services. Using the FUPE framework helped in showing how the failures associated with capital accumulation at CSO and community leadership institutional levels in both settlements have resulted in women relying on formal and informal water and sanitation practices that put them in marginalised positions at the household and community levels as highlighted in this chapter.

Moreover, using the FUPE framework further assisted in highlighting how social processes that are linked to power, culture and social relations affect women's water and sanitation at the community and household levels. The findings in this chapter have shown how men in the two settlements use their power, cultural beliefs and social relations at the household and community levels to degrade and marginalise women. As presented in this chapter that women in QQ Section find themselves marginalised by males in their households for using the bucket for sanitation purposes during their menstrual periods due to the cultural beliefs that perceive women as unclean when they

menstruate. As discussed in this chapter, in the Marlboro South case the cultural beliefs are mainly embedded in patriarchy which affects how women access water and sanitation at the household and community levels. Men at the household level in Marlboro South use their patriarchal powers to forbid women from using the bucket within their households and women carry the burden of ensuring there is water within their households. At the community level women are forced to clean and fix shared water and sanitation facilities by the men who use patriarchal powers to govern within the warehouses. Thus, in this regard the FUPE helps to show how all these social processes that are linked to power, cultural beliefs and social relations further widen gender-based inequalities in water and sanitation access in informal settlements.

The FUPE framework helped in further outlining issues associated with class and capital accumulation, which have affected women's water and sanitation access at the community level particularly in QQ Section. As shown in this chapter that the women who use rented facilities in QQ Section have been facing financial exploitation and marginalisation, due to their poor socio-economic background from those who govern and own water and sanitation facilities in Q Section.

Chapter 6 presented the ecological approaches such as the unsuitable nature of the land and the unhealthy environmental factors that frame water and sanitation provision in both QQ Section and Marlboro South. The unsuitable nature of the land in QQ Section led to the CoCT providing insufficient water and sanitation facilities that are located in inconvenient areas in the settlement. The FUPE framework allowed this study to outline how the ecological approaches in QQ Section led to the use of informal water and sanitation arrangements that presented various challenges for women's access. The FUPE further helped in showing how the lives of women in QQ Section are constantly threatened due to the use of facilities that are placed in unsafe sections.

In Marlboro South the unhealthy environment led to the CoJ providing the settlement with insufficient standpipes and chemical toilets. The FUPE assisted in highlighting how women waste their time standing in long queues where they often find themselves being

caught up in conflicts among each other in trying to access water and sanitation facilities. The framework further helped in showing how using insufficient formal water and sanitation facilities result in women substituting such facilities with informal water and sanitation practices which present various forms of hardships in terms of access to these services.

7.8 Conclusion

This chapter has shown how the failures from the institutional arrangements and infrastructural arrangements have been the cause of women's water and sanitation services challenges. The chapter discussed challenges of safety, health and hygiene, maintenance of water and sanitation infrastructure, gender-based discrimination at household level and marginalisation of women resulting from not having private connections to water and sanitation infrastructure in the two settlements. This chapter further discussed the conceptual significance of the FUPE framework in guiding this research. Thus, this study has shown that the institutional and infrastructural arrangements in informal settlements exacerbate the challenges women face regarding water and sanitation access in such settlements.

CHAPTER 8

SUMMARY AND CONCLUSION

8.1 Introduction

Having reported, analysed and discussed the findings from the cases of QQ Section and Marlboro South on how the institutional and infrastructural arrangements exacerbate women's access to water and sanitation in informal settlements. This last chapter provides a summary of the study and also discusses the knowledge gap and contribution this study aims to address. The chapter further goes on to make recommendations for future research.

8.2 Study summary

This research set out to understand the specific configurations of the infrastructural and institutional arrangements in two informal settlements that exacerbate or mitigate women's access to water and sanitation services. Chapter 1 set out the problem statement and the research aim and objectives this study aimed to address. To address the study aim, chapter 1 further led a discussion of the FUPE as the conceptual lens that was used to guide the research. As such, in its original form the FUPE consists of limitations that would have served as limitations in this study hence, this study augmented the original FUPE to include all the missing key concepts which would have caused limitations in this research. Augmenting the FUPE provided a variety of perceptions that allowed one to have a deeper understanding of how urban poor women particularly those residing in informal settlements experience access to water and sanitation services.

Chapter 2 reviewed literature on the infrastructural and institutional arrangements found in an informal city and issues of gender and access to water and sanitation in the informal city. The literature debates showed various dimensions. In terms of the infrastructural framework, the debates highlighted how issues of land tenure, nature of the land and the growth of informal settlements affect water and sanitation infrastructural development in such settlements. Debates on the infrastructural arrangements further gave discussions

on the everyday formal and informal water and sanitation practices found in informal settlements.

Regarding the debates around the institutional arrangements, focus was given to government institutions, CSO institutions and community leadership institutions as the main institutional arrangements found in informal settlements. The literature debates on government institutions first gave discussions on how poor access to water and sanitation is used as a mechanism to combat the growth of the settlements by governments. Other debates were around factors of cost recovery and lack of capacity at the government level to provide services in informal settlements. Additionally, the debates further gave a discussion of the unequal prioritisation between water and sanitation in informal settlements and how issues related to the clientelism results in water and sanitation being used as bargaining tools for votes by political representatives.

Regarding CSOs the literature focused on the role of CSOs in informal settlements and how issues of governance such as accountability and transparency in such institutions affect service delivery provision to poor communities. Concerning the community leadership institutions, the literature debates highlighted how these institutions are mainly formed by informal settlement dwellers in the absence of formal institutions in such settlements. Community leadership institutions cover a range of aspects in informal settlements which are not only service delivery related. Thus, the literature debates showed the important role of community leadership institutions in informal settlements while further highlighting the negative impacts some of the institutions have in informal settlements.

Last, literature on gender regarding water and sanitation access in the informal city highlighted the unequal gendered power dynamics that emerge from cultural norms and beliefs which further affect women's water and sanitation access at the household and community levels. Moreover, the debates gave a discussion on how gender is often excluded at the institutional level in the water and sanitation services sector. Discussions on key gender challenges associated with water and sanitation such as safety, health and

hygiene, irregular and inconsistent access, insufficient access, unaffordability and how they affect women's water and sanitation access were given.

Additionally, chapter 3 gave an overview of the methodological approach to solving the research problem. A discussion of why a comparative case study approach with ethnographic elements is the best suitable approach for this research was provided. In this regard the choice of selecting specifically QQ Section which is a settlement located on Eskom state land with servitudes and Marlboro South which is a settlement located inside and around privately owned abandoned warehouses in an industrial area, which are further governed by two political parties, as the two case studies which assisted in achieving the research aims was given. Moreover, a discussion of the choice of selecting the qualitative research approach for this study was given in the chapter.

Chapter 3 further gave an overview of purposive sampling as the chosen sampling method used in this study and the number of women who participated at the household level and the total number of focus group discussions. A general overview of the total number of key informant participants was also outlined. A discussion of secondary data, household unstructured in-depth interviews, focus group discussions and key informant interviews as the data collection instruments used to collect the data in this research were highlighted. Moreover, an outline of the data analyses and analytical approaches that were used to analyse and interpret the data was given. Chapter 3 further outlined the ethical considerations and study limitations. The chapter ended by giving an overview discussion of the fieldwork experiences in both the QQ Section and Marlboro South.

Given the policy changes in the water and sanitation sector that began in the early 2000s which were made to reach the marginalised communities and groups in society chapter 4 of this study focused on the policy framework. The policy framework as such showed how the limitations in the water and sanitation policies and challenges faced by local government have negatively affected the goal of the decentralisation process. Thus, even after the decentralisation process water and sanitation services have not successfully reached the poor women residing in informal settlements.

Chapters 5, 6 and 7 were structured around addressing the three sub-objectives and the main research aim set out in chapter 1. This was done to ascertain that the research objectives were dealt with systematically. Given that the first research objective was to determine and contrast the two settlements in terms of their socio-political dynamics within which water and sanitation are accessed. To address this objective chapter 5 focused on the institutional arrangements in which water and sanitation are accessed in the two settlements. First the chapter gave information on the characteristics of the household study participants. Additionally, the chapter gave an outline of the institutional dynamics and their role in water and sanitation access in the two settlements. The chapter showed that concerning government power institutions, politics that play out at the local government level have been the main cause of the poor water and sanitation services in the two settlements.

The political system of having alliances linked to political parties such as the one adopted by the ANC national governing political party has been a cause of poor water and sanitation services delivery in informal settlements. As shown in both settlements the misconduct of political representatives associated with SANCO as an ANC alliance affected water and sanitation services delivery. In QQ Section access to water and sanitation was blocked due to the settlement withdrawing its membership from SANCO and in Marlboro South water and sanitation supply was cut from the settlement due to SANCO failing to pay the money it collected from the settlement for the services to the CoJ. The governing political party failed to hold the structure accountable, instead in both settlements the party protected the structure, leaving the settlements struggling in terms of water and sanitation access.

Additionally, at the government institutional level water and sanitation access are further hindered by the political contestations resulting from having different political parties in power at the municipal level. The political parties use poor water and sanitation provision in informal settlements as a mechanism to sabotage each other for political accumulation and to drive their political interests. In QQ Section, the DA in the CoCT ran the municipality

according to political affiliation, it failed to help the settlement by holding the ward councillor accountable for misconduct since the councillor is an ANC Ward councillor. The water and sanitation services the CoCT provided to the settlement was further poor since the settlement was under an ANC ward. In Marlboro South, the DA in the CoJ blocked service delivery projects meant for ANC wards which affected the water and sanitation condition in the settlement. Furthermore, in placing the needs and interests of the political party before those of citizens the DA further infringed Ward 109 of its rights to water and sanitation access, which is a DA Ward in Marlboro South and the party further disregarded the rezoning and upgrading negotiations since the agenda of the political party was to evict the residents and make the area strictly industrial. The chapter further revealed how gender in water and sanitation is not prioritised at government level.

In CSO power institutions the chapter showed that the deep-rooted challenges of poor accountability and transparency in some CSOs are at the centre of the poor water and sanitation access in informal settlements. Thus, in QQ Section ABM misused donor funds meant to assist the settlement with issues of service delivery and blocked the settlement from being relocated to land where it will have proper water and sanitation access. While in Marlboro South SDI changed the community savings scheme into a loan scheme and further used donor funds meant for the community for other purposes, these factors affected the community's ability to purchase the warehouses for the upgrading and rezoning plans which would have resulted in better water and sanitation access.

The chapter has demonstrated that in community leadership institutions, the lack of written enforced guiding principles and accountability mechanisms, the lack of active involvement of the community on how the institution is operated allowing the institution to work independently and the lack of determination from the community has affected how these institutions assist the settlements in acquiring water and sanitation services. The QQ Section case managed to show the water and sanitation struggles resulting from these factors and the case study also showed how the new community committee managed to secure water and sanitation for the settlement after the settlement ensured that these various factors were applied in the new community committee. However, in

Marlboro South failures resulting from these conditions caused the MWCC leaders to unlawfully further rent out shacks and blocked the rezoning and upgrading which would have assisted with water and sanitation provision. The failures of the MWCC further affected water and sanitation services at the warehouse level, causing gender inequalities in warehouses without building committees. Yet, the settlement still has not made any improvements and changes to the newly elected MWCC structure. As a result, the settlement faces the risk of having similar issues of misconduct which were found in the old structure, in its newly selected structure.

The second research objective was to determine and contrast the two settlements in terms of their material conditions within which water and sanitation are accessed. To address this objective chapter 6 focused on the infrastructural arrangements in which water and sanitation are accessed in the two settlements. The chapter outlined the infrastructural dynamics found in the two settlements. Through the use of two different settlements this study was able to show that for settlements located on state-owned land government can provide permanent forms of infrastructure without having land tenure complications. Complications associated with formal water and sanitation provision mainly arise when the land is private-owned. As a result, the two case study settlements in this regard demonstrated this.

The two settlements further assisted in showing the different complications presented by a settlement that is dense and located on land with servitudes. The servitudes mainly present technical complications for infrastructural development compared to the health complications that are presented by a settlement located in an industrial area. In this instance, this study showed that these complications play a huge role in the levels of water and sanitation access the government can provide. In QQ Section, the technical complications caused challenges for the provision of enough permanent infrastructure that covers the whole settlement and that is placed in convenient sections of the settlement. It would be easier to provide formal permanent infrastructure in the warehouses in Marlboro South since there has been existing water reticulation and sewer systems. However, the health complications for the residents presented by the industrial

area hinders the reconnection of the infrastructure. Hence, the CoJ could only provide a few interim services that are placed in inconvenient locations. Thus, the lack of access presented by the few infrastructures and the unsafe nature of having the infrastructure in inconvenient sections of both settlements affect water and sanitation access.

The infrastructural and institutional arrangements have been the result of the use of formal communal shared taps and communal shared flush toilets and informal illegal water connections, rented water and sanitation, open defecation and the bucket system in QQ Section. In Marlboro South, the institutional and infrastructural arrangements have resulted in the use of formal communal shared standpipes and communal shared chemical toilets and informal illegally connected water and sanitation, water accessed from Alexandra, open defecation and the bucket system. Chapter 6 outlines the water and sanitation challenges that are presented by the formal and informal arrangements in both the settlements.

The effects of the institutional and infrastructural arrangements revealed in chapter 5 and chapter 6 on water and sanitation services have gender implications. Chapter 7 addressed the third research objective which was to determine and contrast the implications of the socio-political dynamics and the material conditions on women's access to water and sanitation services in the two settlements. Chapter 7 discussed how women face: safety challenges presented by the criminal activities that persist in both settlements, health and hygiene challenges presented by the lack of sanitary disposal bins in the sanitation facilities and lack of water facilities close to sanitation facilities. Challenges related to the maintenance of the sanitation infrastructural arrangements result in health complications and oppression of women. There are further financial burdens and gender-based inequalities women face regarding the maintenance of water and sanitation infrastructure. Household intimacy where women are discriminated against due to the use of buckets. All these factors highlight the gender implications that the infrastructural and institutional arrangements present to women's access to water and sanitation.

8.3 Knowledge contribution

This study contributes to the body of knowledge that focuses on gender pertaining to water and sanitation access in urban informal settlements and the FUPE framework. It does this by offering insights into the experiences of women towards the institutional and infrastructural arrangements that determine access to water and sanitation in two informal settlements with different informal aspects.

In terms of the institutional arrangements key factors at government and community leadership levels which were not covered in the literature were highlighted by this study. Regarding government institutions and their impact on water and sanitation provision the literature debates discussed several factors including politics and clientelism, which are dominant in this inquiry. The debates in chapter 2 and chapter 4 unpack the issue of politics focusing on political contestations to accumulate political power, political parties pushing the interests of the party at the expense of the informal settlements' access to water and sanitation and issues of lack of prioritisation of gender in water and sanitation at the municipal level (Bénit-Gbaffou, 2006; Deuskar, 2019; Kumar, 2018; Mananga, 2012; Mitlin, 2014). However, one key issue under politics that literature did not engage with is the implication of the alliance political system on water and sanitation services at the municipal level. As shown in chapter 5 the alliance political system is one of the political factors which had negative implications on water and sanitation access in the two case study settlements.

Chapter 5 of this study showed how the political alliance system has limitations of having political representatives serving the alliance at the expense of communities, resulting in poor water and sanitation services in informal settlement communities. Thus, this study contributes to the body of knowledge that deals with how government institutions affect water and sanitation access. In this regard, this study adds to the knowledge gap by showing the important aspect related to how the alliance political system has deep-rooted implications of further marginalising the marginalised groups such as women residing in informal settlements, resulting in the growth of gender-based inequalities in water and sanitation access.

Furthermore, this study contributes to the theoretical debates which deal with how community leadership institutions affect water and sanitation access in informal settlements. Literature on community leadership institutions in informal settlements tends to give a general view of the importance and limitations of having such institutions in informal settlements (Barker, 2009; Banks, 2006; CoCT, n.d; Makwarela & Ebrahim, n.d; Srivastava, 2013). The literature does not delve into the underlying factors that are key causes that result in such institutions failing to achieve one of their main obligations, which is to assist the settlements with acquiring services. Where scholars attempted to understand the underlying factors, their reasoning is mainly linked to the lack of mechanisms to hold such structures accountable (Koster & de Vries, 2012). This research study shows that the accountability mechanisms should further be accompanied by enforced written guiding principles of the duties of the institutions and the informal settlement communities should further be actively involved in the operations of the institutions. This research study further shows that the whole settlement should be driven and determined in ensuring that its living conditions and water and sanitation services are improved and not only rely on the institution for all its needs. As shown in chapter 5 of this study, without dealing with these underlying factors in community leadership institutions in informal settlements some of these structures engage in unethical behaviour and misconduct, which further result in challenges on women's water and sanitation access. By highlighting these factors, this study manages to address the existing theoretical gap associated with the role of community leadership institutions in water and sanitation services in informal settlements, which would further assist in limiting the challenges women face when such services are lacking.

This study further makes theoretical contributions to the literature debate that focuses on infrastructural arrangements of water and sanitation in informal settlements. As discussed in chapter 6 that the literature acknowledges the complications on water and sanitation infrastructural development resulting from land tenure dynamics in informal settlements (Evans, 2007; McGranahan, 2015; Rubin, 2011; Sjöstedt, 2008). However, it fails to distinguish between state-owned and private-owned land and the different implications

these have on water and sanitation provision. Chapter 6 of this study highlighted that as much as QQ Section is located on land with servitudes it was easier for the CoCT to install the 27 communal shared flush toilets and 23 communal shared taps, since the land the settlement is located on is state-owned. However, in Marlboro South the levels of government-provided water and sanitation services are lower in terms of quality and quantity. The CoJ provided thirteen communal shared chemical toilets and two shared communal standpipes, since the settlement is located inside and around private-owned warehouses. As such, this study adds to the knowledge gap by showing that when dealing with water and sanitation provision in informal settlements it is important to distinguish between state-owned and private-owned land. These factors determine the government's ability to provide water and sanitation services and they further determine the quality and quantity of the services and these factors further affect the way women access water and sanitation in informal settlements.

This study further contributes to the FUPE framework. While FUPE takes ecological factors into account, it fails to include land tenure dynamics and their implications on water and sanitation access. As highlighted by the two informal settlements analysed in this study, land tenure dynamics greatly affect the government's ability to provide water and sanitation services. In the Marlboro South case study, the insufficient and unreliable access to water and sanitation result from residing in an industrial area in warehouses private-owned by different people. As a result, these challenges restrict the CoJ from supplying the settlement with sufficient and reliable water and sanitation facilities. These factors lead to further challenges for women's water and sanitation access. By showing the challenges presented by land tenure dynamics on women's water and sanitation access in chapter 7 this study adds to the knowledge gap in the FUPE framework which fails to interrogate this important aspect.

The study further makes key contributions to policy. It does this by showing the tensions in policy when it comes to the provision of water and sanitation services particularly to settlements such as Marlboro South, which are located in an industrial area. As presented in chapter 4 the national water and sanitation policies obligate the state to provide water

and sanitation to all citizens. Yet, the law further prohibits government from putting citizens' health and well-being at risk in Section 24 of the Constitution. As a result, this study makes contributions to policy by revealing these important factors that the water and sanitation policies need to include. These two cases further add the key aspect of the differentiated approach that needs to be incorporated in water and sanitation policies in informal settlement communities. As shown in this study, the heterogeneity of informal settlements further presents heterogeneous water and sanitation needs for each settlement. These should be taken into account at the policy level to ensure that the considered policies are aimed at providing sufficient water and sanitation in informal settlement communities, thus further dealing with the gendered inequalities in access to these services in such settlements.

As highlighted in the findings in chapter 7 that all these factors form part of the issues resulting from the institutional and infrastructural arrangements that present challenges for women's water and sanitation access in informal settlements. As a result, these should be included in the literature debates, FUPE framework and water and sanitation policies. Therefore, all these implications represent the contributions of the study that are expected to benefit the body of knowledge that focuses on gender, water and sanitation access in urban informal settlements.

8.4 Recommendations for future research

One avenue for further research would be research into the informal community leadership structures in informal settlements and how can these structures be accommodated in the broader municipal context. The importance of community leadership structures became apparent while, conducting this study. From the outside it seemed as if the government is the key power institution informal settlements depend on. However, through data collection I discovered that the community leadership structures are more respected and perceived as superior than the government on the ground in informal settlements. It was interesting to note how such institutional structures can either assist or disrupt service delivery provision in informal settlements. This raised the question, why are these informal institutional structures not accommodated at municipal

and policy levels seeing the levels of influence and power they possess in informal settlements. Thus, this would be a useful research avenue to determine how such informal structures can be formally accommodated into the broader municipal system, where they can work hand in hand with municipalities in bringing services delivery to informal settlements.

Additionally, another area for further research would be to research the effects of having a close working relationship between the institutional power structures and the informal settlements in finding solutions of supplying gender-driven approaches in water and sanitation access in the settlements. In Marlboro South, this seemed to have been the way SDI conducted matters, by pushing a more cooperative approach between the government institutions and the community leadership structures. However, this study did not go into detail, to determine how the nature of the relations between SDI, government institutions, MWCC, the building committees and the community at large benefited or negatively affected gender water and sanitation access in the settlement. This study mainly focused on the relationships between the community and the individual institutional power structures and how each of the structures affected water and sanitation access in the settlements. Yet, it would be of great interest to determine the implications of having a cooperative relationship among all the institutional power structures in working towards the common goal of having a gendered approach to water and sanitation provision in informal settlements.

8.5 Concluding remarks

This study has shown that the institutional and infrastructural arrangements in informal settlements exacerbate the challenges women face regarding water and sanitation access. Women in informal settlements continue facing marginalisation, due to poor and lack of water and sanitation access in such settlements. The politics that play out at the local government level, the challenges emerging from lack of transparency and accountability mechanisms in CSOs are leading factors that affect water and sanitation services in informal settlements. Furthermore, this study revealed that for informal institutions such as community leadership institutions to be effective in assisting informal

settlements with acquiring water and sanitation services, the settlements should ensure that there are written enforced guiding principles and accountability mechanisms in place to govern these institutions. Moreover, the settlements should ensure that the institutions do not work independently from the settlement, the settlement should be actively involved and also be determined in working towards acquiring services and not leave all responsibilities to the community leadership institutions.

Concerning the implications of the infrastructural arrangements on water and sanitation access, this study revealed that a more differentiated approach should be taken that takes into account land tenure factors, the nature of the land on which the settlements are located and the nature of the settlements. This study has shown that even though informal settlement dwellers generally do not have tenure, those that are located on state land are in a better position than those located on private land to be provided with government formalised water and sanitation provision. Yet, the levels of access are mainly determined by the nature of the land on which the settlement is located and the nature of the settlement.

Due to the institutional and infrastructural arrangements, informal settlements use a mixture of formal and informal water and sanitation practices that exacerbate women's water and sanitation access challenges. As highlighted in this research, the institutional and infrastructural arrangements have been the cause of challenges related to safety, health and hygiene, maintenance of water and sanitation facilities, gender-based discrimination at the household level and marginalisation of women resulting from not having private connections to water and sanitation infrastructure in informal settlements.

Thus, this study shows that there is no easy method to deal with the water and sanitation challenges faced by women in informal settlements. There are multiple factors associated with the institutional and infrastructural arrangements that affect women's water and sanitation access in informal settlements, and most of these factors are specific to each settlement. Hence, this study concludes that when dealing with gender in water and sanitation services in informal settlements a differentiated approach should be

considered. The approach should take into account the differences of the individual settlements in terms of the institutional and infrastructural arrangements as these frame women's access in such settlements. In light of these factors, I conclude that indeed the institutional and infrastructural arrangements exacerbate the challenges that women face regarding water and sanitation access in informal settlements.

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10. APPENDICES

APPENDIX A: HOUSEHOLD PARTICIPANTS- OPEN-ENDED INTERVIEW SCHEDULE

RESEARCH TITLE: TOPIC: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements **HOUSEHOLD INTERVIEW SCHEDULE** **BUKIWE NTWANA : PHD STUDENT(1568385)** **WSG: UNIVERSITY OF WITWATERSRAND**
STUDY SITE (*Please write the study site)* :

1. How old were you at your last birthday?	

2. What is the highest level of education you have completed? *[Do not read options]*						
Still in primary school	Primary school completed/ Still in high school	High school completed	Post matric qualification/diploma/short course certificate	University Degree	No formal schooling /some primary schooling	Don't know *[Do not read]*
1	2	3	4	5	6	7

3. Tell me about the structure of your household?

a. How many are you in total?

b. Who is the head of the household?

c. Total number of children divided per gender

4. How does your household function?

a. How does the household generate income?

b. Who has the power to make decisions regarding household responsibilities (including water and sanitation)?

c) How has this affected you as a women residing in this household?

5. How did your household end up in this area?

6. Who controls and administers people who can construct a dwelling in this area?

7. Please explain the main challenges that you encounter in residing in this particular settlement as a women?

a. How has your health been affected by the environment you reside in?

b. Fear of being evicted?

c. Safety and security as a female?

8. Which are the three major services delivery challenges you encounter in this area?	Water	Sanitation	Electricity	Refuse removal	Roads	Other
	1	2	3	4	5	6

9. Tell me how you access your water and sanitation services?

a. How would you describe your water and sanitation levels in both quality and quantity of the services?

b. Who installed the infrastructure?

b. Can you explain the challenges encountered at the water and sanitation access points?

c. What are the gender based dynamics that you encounter on a daily basis that you may define as major difficulties in your water and sanitation access (especially with you being a women)?

10. Which prominent power structure/s exist or worked in this community?

a. What are/were their responsibilities?

b. What has their role been in water and sanitation services?

b. Are/were they efficient and effective in performing their duties?

11. If the community is dissatisfied regarding the way the power structure/s does things, where can one express their dissatisfaction?

12. Was there ever consultation done regarding upgrading or relocation of this settlements? If yes how did the process go?

13. How can your access to water and sanitation be improved in this area?

APPENDIX B: HOUSEHOLDS- PARTICIPANT INFORMATION SHEET

Dear potential research respondent

My name is Bukiwe Ntwana. I am doing my PhD at University of the Witwatersrand, in the School of Governance. My research is on gender-based inequalities in access to water and sanitation in informal settlements.

I am trying to understand the specific gender-based vulnerabilities faced by women in accessing water and sanitation. I am doing research in two informal settlements: one in Cape Town (QQ Section) and the other one in Johannesburg (Marlboro South warehouses). I want to explore how the institutions of power and the infrastructural arrangements in the specific settlements have impacted women's water and sanitation access.

As a woman living here, I would like to talk with you about your experiences in regards to your water and sanitation access in this settlement and your experiences and views towards the power institutions. Your participation is entirely voluntary, and I will greatly appreciate any input that you can offer. Please note, however, that as this is a student project and I am unable to compensate you for your participation.

I will ensure that you remain anonymous, and you can withdraw from participating in the study at any point if you feel uncomfortable.

During the interview I will be taking some notes and following up on issues where I need more understanding. The interview is expected to last for 1hour.

Should there be any need to raise any complaints about me, feel free to contact my supervisors: Dr Laila Smith: lailaruth.smith@wits.ac.za or 011 717 3157
Dr Alex Wafer: Alex.Wafer@wits.ac.za or 011 717 6517

The findings of this study will be reported at seminars, conferences, academic papers and research reports/thesis. Feel free to ask any questions or to get clarity at any time. I can be reached on 0837548779 or buxntwana@gmail.com .

APPENDIX C: HOUSEHOLDS- CONSENT FORM

Topic: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements

Researcher: Bukiwe Ntwana, Cell: 083 7548779, Email: bxntwana@gmail.com

I, the undersigned have read/understood the information presented in the information letter/verbal communication regarding the research being conducted.

I confirm that (Please tick box as appropriate)

1.	**I have been given the opportunity to ask questions about the research**	**Yes**	**No**
2.	**I voluntarily agree to participate in the research, on the understanding that I can withdraw at any point**	**Yes**	**No**
3.	**I have been informed that I will remain anonymous**	**Yes**	**No**
4.	**I understand that the research finding may be shared at seminars, conferences, publications and research reports**	**Yes**	**No**

Participant

Name: _____ Signature: _____ Date: _____

Researcher

Name: _____ Signature: _____ Date: _____ Place: _____

APPENDIX D: FOCUS GROUP EXERCISE

1. **For the women who arrived in the settlement when it was formed or at least two year after it was formed (1989-1991), how were your water and sanitation conditions back then compared to the current date?**

2. **For the women who arrived in the period when the CSOs started working with the settlement (2007/2008 QQ Section and 2007 Marlboro South) how have your water and sanitation access been so far?**

3. **Have government and the CSOs assisted with improving your water and sanitation conditions?**

4. **What role do the community leadership organisations play in terms of water and sanitation?**

5. **Have the community leadership organisations been effective in their duties, including assisting the settlement with acquiring water and sanitation services?**

6. **What are the common water and sanitation practices you as women use?**

7. **How have these affected your water and sanitation access? (at community and household level)**

8. **What more can be done by the power institutions to improve your water and sanitation access?**

APPENDIX E: FOCUS GROUP- PARTICIPANT INFORMATION SHEET

Dear potential research respondent

My name is Bukiwe Ntwana. I am currently undertaking a PhD in the School of Governance at the University of the Witwatersrand. My research topic is gender-based inequalities in access to water and sanitation in South African informal settlements.

The aim of this research is to understand the specific gender-based vulnerabilities faced by women in access to water and sanitation in two informal settlements in South Africa: i.e. City of Cape Town (QQ Section) and the other one will be from the City of Johannesburg (Marlboro South warehouses). Furthermore, I want to explore how the institutions of power and the infrastructural arrangements in the specific settlements have impacted women's water and sanitation access.

As a woman residing in one of the research case study areas, I would like you to participate in a focus group activity where you will share your day-to-day experiences in regards to water and sanitation access and your experiences and views in relations to the power institutions. Your participation in this research will be very valuable, but please note that as this is a student project I am unable to compensate you for your participation. Participation is voluntary, and I will ensure that you remain anonymous. If you agree to participate, you may refuse to answer any questions that you are uncomfortable in answering, you have the right to ask for clarity when you do not understand and you have the right to withdraw from participating in the study at any point if you feel uncomfortable.

During the focus group exercise I will be taking some notes and following up on issues where I need more understanding. The focus group exercise is expected to last for 1hr-1:30min.

Should there be any need to raise any complaints about me, feel free to contact my supervisors: Dr Laila Smith: lailaruth.smith@wits.ac.za or 011 717 3157
Dr Alex Wafer: Alex.Wafer@wits.ac.za or 011 717 6517

APPENDIX F: FOCUS GROUPS- CONSENT FORM

Topic: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements

Researcher: Bukiwe Ntwana, Cell: 083 7548779, Email: bxntwana@gmail.com

I, the undersigned have read/understood the information presented in the information letter/verbal communication regarding the research being conducted.

I confirm that (Please tick box as appropriate)

1.	**I have been given the opportunity to ask questions about the research**	**Yes**	**No**
2.	**I voluntarily agree to participate in the research by taking part in the focus group activity**	**Yes**	**No**
3.	**I have been informed of my right to participate in the research and I have been informed of my right to withdraw at any time verbally or in writing without any penalty**	**Yes**	**No**
4.	**I understand that the research will be shared at seminars, conferences, publications and research reports**	**Yes**	**No**

Participant

Name: _____ Signature: _____ Date: _____

Researcher

Name: _____ Signature: _____ Date: _____ Place: _____

APPENDIX G: CAPE TOWN OFFICIALS- INTERVIEW SCHEDULE

This interview serves to gain insight on the municipality's challenges of water and sanitation services delivery bought by informal settlements mainly located on servitude land within relevant municipal areas. It forms part of a PhD study which focuses on gender-based inequalities in access to water and sanitation in South Africa focusing on two informal settlements.

1. **What challenges do settlements located on servitudes present to the City?**

2. **How does the City ensure that people residing on servitude land have access to basic water and sanitation services?**

3. **Many informal settlements use VIP container sanitation facilities, however there are areas such as QQ Section which rely on the bucket system for sanitation. What is the criteria that the City uses to provide sanitation services for different informal settlements settings (settlements on private land and settlements on land with servitudes)? Are women's needs taken into consideration when these decisions are made?**

4. **How does the City deal with challenge of infrastructure breakdown and theft of infrastructure such as copper taps and pipes that is often found in informal settlements and has been reported as a challenge in QQ Section as well?**

5. **Can you please explain what affected the relocation process of the QQ Section residents to Bardale in 2007?**

6. **When dealing with the overall provision of water and sanitation infrastructure in informal settlements does the City take into account issues of gender?**

7. **Lack of funding has been cited as a major reason for the neglect and lack of infrastructure in many municipal contexts. What implications does financial capacity have on water and sanitation services in informal settlements taking into account unaffordability of the service for the poor?**

8. **What are some of the institutional challenges that the City faces when it comes to ensuring water and sanitation services provision in informal settlements?**

9. **Is there any other additional information that you would like to add?**

APPENDIX H: MUNICIPALITIES- PARTICIPANT INFORMATION SHEET

Dear potential research respondent

My name is Bukiwe Ntwana. I am doing my PhD at University of the Witwatersrand, in the School of Governance. My research is on gender-based inequalities in access to water and sanitation in informal settlements.

I am trying to understand the specific gender-based vulnerabilities faced by women in accessing water and sanitation. I am doing research in two informal settlements: one in Cape Town (QQ Section) and the other one in Johannesburg (Marlboro South warehouses). I want to explore whether water and sanitation arrangements in these settlements have negative impacts on women in particular.

This is why your participation as the person responsible for issues related to water and sanitation services and informal settlements in the municipality is valuable in this study, as it will assist in understanding these issues from a municipal perspective much better. Your participation is entirely voluntary, and I will greatly appreciate any input that you can offer. Please note, however, that as this is a student project and I am unable to compensate you for your participation.

I will ensure that you remain anonymous, and you can withdraw from participating in the study at any point if you feel uncomfortable.

During the interview I will be taking some notes and following up on issues where I need more understanding. The interview is expected to last for 30min-1hour.

Should there be any need to raise any complaints about me, feel free to contact my supervisors: Dr Laila Smith: lailaruth.smith@wits.ac.za or 011 717 3157
Dr Alex Wafer: Alex.Wafer@wits.ac.za or 011 717 6517

The findings of this study will be reported at seminars, conferences, academic papers and research reports/thesis. Feel free to ask any questions or to get clarity at any time. I can be reached on 0837548779 or buxntwana@gmail.com

APPENDIX I: MUNICIPAL OFFICIALS- CONSENT FORM

Topic: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements

Researcher: Bukiwe Ntwana, Cell: 083 7548779, Email: bxntwana@gmail.com

I, the undersigned have read/understood the information presented in the information letter regarding the research being conducted.

I confirm that (Please tick box as appropriate)

1.	**I have been given the opportunity to ask questions about the research**	**Yes**	**No**
2.	**I voluntarily agree to participate in the research, on the understanding that I can withdraw at any point**	**Yes**	**No**
3.	**I have been informed that I will remain anonymous**	**Yes**	**No**
4.	**I understand that the research finding may be shared at seminars, conferences, publications and research reports**	**Yes**	**No**

Participant

Name: _____ Signature: _____ Date: _____

Researcher

Name: _____ Signature: _____ Date: _____ Place: _____

APPENDIX J: CITY OF JOHANNESBURG WARD COUNCILLOR- INTERVIEW SCHEDULE

This interview serves to gain insight on the municipality's challenges of water and sanitation services delivery bought by informal settlements mainly located inside abandoned warehouses. It forms part of a PhD study which focuses on gender-based inequalities in access to water and sanitation in South Africa focusing on two informal settlements.

1. **Which are the major challenges do the abandoned warehouses used as dwellings create for the City?**

2. **What are the challenges that the municipality encounters when it comes to upgrading of informal dwellings built within abandoned buildings?**

3. **How does the municipality deal with water and sanitation services for people residing in abandoned buildings?**

4. **When it comes to water and sanitation services for people residing in abandoned buildings what are the unique challenges that the municipality encounters, when comparing supplying these services to other types of informal settlements built on land?**

5. **Are there specific water and sanitation models and arrangements that you as the ward councillor is aware off which are used in these types of settings?**

6. **What impact do these arrangements have on the municipal cost-recovery systems and unaccounted for water and how does the municipality deal with these issues?**

7. **What are the common challenges women complain about in terms of water and sanitation services in Marlboro South?**

8. **When dealing with water and sanitation services how do you as the ward councillor ensure that the municipality takes into account gender dynamics in the provision of such services in Marlboro South?**

9. **Given that Marlboro South is divided into two wards how does this affect your responsibilities as an ANC/DA ward councillor?**

10. **Is there any other additional information that you would like to add?**

APPENDIX K: WARD COUNCILLORS- PARTICIPANT INFORMATION SHEET

Dear potential research respondent

My name is Bukiwe Ntwana. I am doing my PhD at University of the Witwatersrand, in the School of Governance. My research is on gender-based inequalities in access to water and sanitation in informal settlements.

I am trying to understand the specific gender-based vulnerabilities faced by women in accessing water and sanitation. I am doing research in two informal settlements: one in Cape Town (QQ Section) and the other one in Johannesburg (Marlboro South warehouses). I want to explore how the institutions of power and the infrastructural arrangements affect women's water and sanitation arrangements in these settlements.

This is why your participation as the ward councillor is valuable in this study, as it will assist in understanding these issues from your perspective much better. Your participation is entirely voluntary, and I will greatly appreciate any input that you can offer. Please note, however, that as this is a student project and I am unable to compensate you for your participation.

I will ensure that you remain anonymous, and you can withdraw from participating in the study at any point if you feel uncomfortable.

During the interview I will be taking some notes and following up on issues where I need more understanding. The interview is expected to last for 30min-1hour.

Should there be any need to raise any complaints about me, feel free to contact my supervisors: Dr Laila Smith: lailaruth.smith@wits.ac.za or 011 717 3157
Dr Alex Wafer: Alex.Wafer@wits.ac.za or 011 717 6517

The findings of this study will be reported at seminars, conferences, academic papers and research reports/thesis. Feel free to ask any questions or to get clarity at any time. I can be reached on 0837548779 or buxntwana@gmail.com

APPENDIX L: WARD COUNCILLOR- CONSENT FORM

Topic: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements

Researcher: Bukiwe Ntwana, Cell: 083 7548779, Email: bxntwana@gmail.com

I, the undersigned have read/understood the information presented in the information letter regarding the research being conducted.

I confirm that (Please tick box as appropriate)

1.	**I have been given the opportunity to ask questions about the research**	**Yes**	**No**
2.	**I voluntarily agree to participate in the research, on the understanding that I can withdraw at any point**	**Yes**	**No**
3.	**I have been informed that I will remain anonymous**	**Yes**	**No**
4.	**I understand that the research finding may be shared at seminars, conferences, publications and research reports**	**Yes**	**No**

Participant

Name: _____ Signature: _____ Date: _____

Researcher

Name: _____ Signature: _____ Date: _____ Place: _____

APPENDIX M: CIVIL SOCIETY ORGANIZATIONS- INTERVIEW SCHEDULE

1. **Background of the organization**

a) Please give me a brief background of the CSO?

b) How does it operate? (Who funds it?)

c) Is it an advocacy or project oriented organization that works on certain projects within the relative informal settlements?

d) Does the organization collaborate with other similar organizations regarding its tasks and projects?

e) Which leadership structures does the organization connect when it needs to undertake certain projects within the relative informal settlements?

f) How does the organization interact with government?

2. **What are the common challenges that informal settlement dwellers face in regards to insecure tenure?**

3. **What role do CSOs play in trying to assist informal settlement dwellers with their tenure challenges?**

4. **Which are the broader service delivery challenges that persist mainly in informal settlements on servitudes and settlements within abandoned buildings?**

5. **When dealing with informal settlements within abandoned buildings and settlements on servitude land, which are the common water and sanitation arrangements that are used in such settlements?**

6. **What are the common gender based challenges related to water and sanitation that exist in these two types of informal settlements?**

7. **How does the South African policy environment deal with these challenges?**

   a) From formulation until implementation phase

   b) Do government policies deal with these challenges adequately?

8. **What are the common mistakes/shortcoming that government seems to make when dealing with access to basic services in informal settlements in terms of gender?**

9. **How can these be addressed?**

10. **How can government improve water and sanitation services in informal settlements especially settlements that are built on land with servitudes and those within abandoned buildings?**

11. **What role has your organisation played in ensuring that water and sanitation services are improved mainly for women in informal settlements?**

12. **What role do CSOs play in empowering women in regards to water and sanitation services in the two relevant informal settlements?**

APPENDIX N: CIVIL SOCIETY ORGANIZATIONS- PARTICIPANT INFORMATION SHEET

Dear potential research respondent

My name is Bukiwe Ntwana. I am doing my PhD at University of the Witwatersrand, in the School of Governance. My research is on gender-based inequalities in access to water and sanitation in informal settlements.

I am trying to understand the specific gender-based vulnerabilities faced by women in accessing water and sanitation. I am doing research in two informal settlements: one in Cape Town (QQ Section) and the other one in Johannesburg (Marlboro South warehouses). I want to explore how the institutions of power and the infrastructural arrangements affect women's water and sanitation arrangements in these settlements.

As a civil society organisation that has worked in this settlement and has been working with informal settlement communities at large in trying to deal with the daily challenges faced by people staying in such settlements, your participation in this research will be valuable. Please note that your participation is entirely voluntary, and I will greatly appreciate any input that you can offer. Please note, however, that as this is a student project and I am unable to compensate you for your participation.

I will ensure that you remain anonymous, and you can withdraw from participating in the study at any point if you feel uncomfortable.

During the interview I will be taking some notes and following up on issues where I need more understanding. The interview is expected to last for 30min-1hour.

Should there be any need to raise any complaints about me, feel free to contact my supervisors: Dr Laila Smith: lailaruth.smith@wits.ac.za or 011 717 3157
Dr Alex Wafer: Alex.Wafer@wits.ac.za or 011 717 6517

The findings of this study will be reported at seminars, conferences, academic papers and research reports/thesis. Feel free to ask any questions or to get clarity at any time. I can be reached on 0837548779 or buxntwana@gmail.com

APPENDIX O: CIVIL SOCIETY ORGANIZATIONS- CONSENT FORM

Topic: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements

Researcher: Bukiwe Ntwana, Cell: 083 7548779, Email: bxntwana@gmail.com

I, the undersigned have read/understood the information presented in the information letter regarding the research being conducted.

I confirm that (Please tick box as appropriate)

1.	**I have been given the opportunity to ask questions about the research**	**Yes**	**No**
2.	**I voluntarily agree to participate in the research, on the understanding that I can withdraw at any point**	**Yes**	**No**
3.	**I have been informed that I will remain anonymous**	**Yes**	**No**
4.	**I understand that the research finding may be shared at seminars, conferences, publications and research reports**	**Yes**	**No**

Participant

Name: _____ Signature: _____ Date: _____

Researcher

Name: _____ Signature: _____ Date: _____ Place: _____

APPENDIX P: COMMUNITY LEADERSHIP ORGANISATIONS

This interview serves to gain insight on the duties and responsibilities of community leadership organisations and the challenges of water and sanitation services delivery in informal settlements. It forms part of a PhD study which focuses on gender-based inequalities in access to water and sanitation in South Africa focusing on two informal settlements.

1. **When was the structure formed and what was the reason for its formation?**

2. **How are leaders/members selected to serve in the structure? (Is gender a criteria in the selection process?)**

3. **How long can one serve in the structure?**

4. **What are the duties and responsibilities of the structure?**

5. **How often does the community meet with the structure?**

6. **To whom does the structure answer?**

7. **How are the water and sanitation services in the community?**

a) Which water and sanitation practices does the community use
b) Who installed the infrastructure?
c) Who is responsible for maintaining it?
d) What are the challenges faced in regards to water and sanitation access? (on women)

8. **How would you describe government's role in assisting the settlement in regards to water and sanitation services taking into account women's specific needs?**

9. **How would you describe the work done by CSOs in relations to water and sanitation in the settlement (Do they consider women's specific needs to such services)?**

10. Is there anything you would like to share further?

APPENDIX Q: COMMUNITY LEADERSHIP ORGANIZATIONS- PARTICIPANT INFORMATION SHEET

Dear potential research respondent

My name is Bukiwe Ntwana. I am doing my PhD at University of the Witwatersrand, in the School of Governance. My research is on gender-based inequalities in access to water and sanitation in informal settlements.

I am trying to understand the specific gender-based vulnerabilities faced by women in accessing water and sanitation. I am doing research in two informal settlements: one in Cape Town (QQ Section) and the other one in Johannesburg (Marlboro South warehouses). I want to explore how the institutions of power and the infrastructural arrangements affect women's water and sanitation arrangements in these settlements.

As the community leader who serves in the leadership structure in the settlement, you form part of the people who know the water and sanitation conditions in the settlement, as a result your participation in this research will be valuable. Please note that your participation is entirely voluntary, and I will greatly appreciate any input that you can offer. Please note, however, that as this is a student project and I am unable to compensate you for your participation.

I will ensure that you remain anonymous, and you can withdraw from participating in the study at any point if you feel uncomfortable.

During the interview I will be taking some notes and following up on issues where I need more understanding. The interview is expected to last for 30min-1hour.

Should there be any need to raise any complaints about me, feel free to contact my supervisors: Dr Laila Smith: lailaruth.smith@wits.ac.za or 011 717 3157
Dr Alex Wafer: Alex.Wafer@wits.ac.za or 011 717 6517

The findings of this study will be reported at seminars, conferences, academic papers and research reports/thesis. Feel free to ask any questions or to get clarity at any time. I can be reached on 0837548779 or buxntwana@gmail.com

APPENDIX R: COMMUNITY LEADERSHIP ORGANIZATIONS- CONSENT FORM

Topic: Gender-based inequalities in access to water and sanitation in South Africa: Case study of two informal settlements

Researcher: Bukiwe Ntwana, Cell: 083 7548779, Email: bxntwana@gmail.com

I, the undersigned have read/understood the information presented in the information letter regarding the research being conducted.

I confirm that (Please tick box as appropriate)

1.	**I have been given the opportunity to ask questions about the research**	**Yes**	**No**
2.	**I voluntarily agree to participate in the research, on the understanding that I can withdraw at any point**	**Yes**	**No**
3.	**I have been informed that I will remain anonymous**	**Yes**	**No**
4.	**I understand that the research finding may be shared at seminars, conferences, publications and research reports**	**Yes**	**No**

Participant

Name: _____ Signature: _____ Date: _____

Researcher

Name: _____ Signature: _____ Date: _____ Place: _____